

**Report**

**On**

**Hydrographic Survey Associated With The Miss Megan Accident  
West Cote Blanche Bay  
St. Mary Parish, Louisiana**

**For**

**CHEVRON USA  
5750 Johnston Street  
Lafayette, Louisiana 70503**

**By**

**John Chance Land Surveys, Inc.  
200 Dulles Drive  
Lafayette, Louisiana 70506**

**Project Number 06-0654**

**JANUARY 2007**



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## JOHN CHANCE LAND SURVEYS, INC.

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### INTRODUCTION

Under contract through Chevron USA (CHEVRON) and by the consent of the National Oceanic and Atmospheric Administration (NOAA) and the United States Coast Guard (USCG), John Chance Land Surveys, Inc. (JCLS) conducted two hydrographic surveys at the scene of the accident associated with the MISS MEGAN tugboat and ATHENA spud barge that took place on October 12, 2006. The hydrographic surveys took place in West Cote Blanche Bay, Saint Mary Parish, Louisiana (Figure 1). Photographs of the ATHENA spud barge are illustrated in Appendix A.

The goal of the preliminary hydrographic survey was to use a high resolution scanning sonar to identify any potential seafloor scarring or unusual features that might have been associated with the accident. Additionally, real-time data was used to assist divers in locating any exposed pipelines. The extent of this survey was from the ATHENA spud barge out to approximately 150 feet in all directions. All recorded scanning sonar data was interpreted at JCLS headquarters in Lafayette, Louisiana.

Based on the results of the scanning sonar imagery, a more comprehensive hydrographic survey was conducted in order to map the water bottom in the vicinity of the accident. This second hydrographic survey utilized a side-scan sonar and a single beam echosounder. Survey boundaries were separated into three areas and are described in the Observation and Findings section of this report. Given the Automatic Identification System (AIS) track for the MISS MEGAN, the track could then be overlaid onto the side-scan sonar imagery and bathymetry data. This combination of data and imagery could then be analyzed for features such as propeller scarring and/or other drag marks. Features such as these may allow for a determination of possible factors which may have influenced or caused the accident.

### CHRONOLOGY OF JCLS AND ASSOCIATED EVENTS

October 12, 2006 – MISS MEGAN accident.

October 13, 2006 – Call from CHEVRON to locate pipelines using marine magnetometer.

October 14, 2006 – JCLS assists divers locating exposed pipes using scanning sonar (JCLS Personnel: Cliff Lazarus, Sonar Party Chief; Curtis Norris, Sonar Technician; Kenneth Brinkley, Sonar Helper). JCLS conducts as-built on pipeline (JCLS Personnel: Bill Bacot, Survey Party Chief; Johnny Alejandro, Survey Instrument Technician; Balbir Bains, Survey Helper).

October 16, 2006 – JCLS assists divers locating exposed pipes using scanning sonar (JCLS Personnel: Cliff Lazarus, Sonar Technician; Joseph Devillier, Survey Instrument Technician).

October 17, 2006 – JCLS assists divers locating exposed pipes using scanning sonar (JCLS Personnel: Cliff Lazarus, Sonar Technician; Joseph Devillier, Survey Instrument Technician).

October 18, 2006 – JCLS assists divers locating exposed pipes using scanning sonar (JCLS Personnel: Cliff Lazarus, Sonar Technician; Joseph Devillier, Survey Instrument Technician).



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JCLS attempts to collect data utilizing the side-scan sonar but seas are too rough to work (JCLS Personnel: Bill Bacot, Survey Party Chief; Brad Segura, Sonar Party Chief; Matt Conn, Sonar Helper).

October 19, 2006 – Meeting with agencies and involved parties in Morgan City, LA (JCLS Personnel: Brad Segura, Adrian Salas, and Cliff Lazarus).

October 20, 2006 – JCLS attempts to side-scan survey while ATHENA spud barge is in place. Sea conditions rough in the morning however the seas calmed significantly by the end of the day allowing personnel to collect data (JCLS Personnel: Brad Segura, Sonar Party Chief; Cliff Lazarus, Sonar Technician; Matt Conn, Sonar Helper).

October 24, 2006 – Preliminary detail of hydrographic survey submitted to CHEVRON and National Transportation Safety Board (NTSB).

November 08 – 18, 2006 – JCLS assists divers in locating pipeline crossings and replace damaged section of pipe using scanning sonar (JCLS Personnel: Leonard Viltz, Sonar Party Chief or Sonar Technician; Adrian Salas, Sonar Helper; Robert Rushing, Survey Helper).

December 01, 2006 – JCLS presents Final Draft of Hydrographer's Report to CHEVRON for comments (JCLS Personnel, Brad Segura, Mark Spivey, and Carlos Femmer).

December 05, 2006 – JCLS presents Final Draft of Hydrographer's Report to NOAA for comments.

December 22, 2006 – JCLS receives comments from NOAA.

January 12, 2007 – JCLS submits Final Hydrographer's Report to CHEVRON.

### VALIDATION PROCEDURES

#### Scanning Sonar

Since the scanning sonar is a stationary tool, the position of the sonar was taken using StarFix DGPS positioning. Reflectors with known positions were set out and scanned in order to correct the orientation of images.

#### Bathymetry

Prior to collecting any data, positioning offsets between the GPS antenna and echosounder transducer were applied to the navigation file and the single beam echosounder was adjusted to incorporate the draft of the survey vessel. Echosounder readings were verified by manually measuring the water depth with a sounding pole near the echosounder transducer. This procedure was repeated at the end of the day to ensure the echosounder was working properly throughout the survey. A variation of 0.10 feet was noted in the recorded water depth data between the beginning and end of the day.

To account for tidal fluctuations, raw water depth data was tide corrected to reflect Mean Low Low Water, MLLW, by using a nearby automatic tide gauge located at Cypremort Point, LA. The



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automatic tide gauge is maintain and operated by NOAA and is identified as Cypremort Point, LA: LA Station ID: 8765251. For reference purposes Appendix D reflects the difference between MLLW and Mean Sea Level, MSL. Additionally, the water surface elevation was measured at the beginning and end of the day. This was accomplished by measuring the distance between a point with a known elevation and the water surface. This information was collected solely as a backup in case data from the automatic tide gauge was not available.

### Side-Scan Sonar

As part of JCLS's Standard Operating Procedure, stationary objects were scanned with the side-scan sonar in opposite directions; additionally, positions on exposed objects such as pilings were collected using StarFix DGPS positioning. The side-scan sonar data were adjusted to the corrected position, which was validated by comparing objects with known positions to the same object's position within the imagery. Pre-plotted survey lines were spaced so that adjacent sonar images overlapped to ensure 100% coverage.

All side-scan sonar data and bathymetry data was collected on October 20 of 2006.

## **OBSERVATIONS AND FINDINGS**

The preliminary survey consisted of deploying the scanning sonar at six locations around the ATHENA spud barge. The position of each sonar drop is illustrated in Figure 2. This initial image mosaic revealed interesting features, which included a seafloor depression potentially from an explosion and seafloor scarring. Due to the amount seafloor disturbance near the ATHENA spud barge, the significance of the seafloor scarring being associated with the MISS MEGAN or the ATHENA spud barge could not be determined. This information was brought to the October 19, 2006 briefing meeting with agencies and involved parties in Morgan City, LA and the decision to continue with a larger, more comprehensive survey was made.

The comprehensive hydrographic survey consisted of three areas, which were side-scanned. The first area investigated was at the scene of the accident while the ATHENA spud barge was in place (500' radius from the barge). The second area scanned was between the location of the accident out towards Tank Battery No. 3 (1400' wide by 3800' long). This section scanned was determined by backtracking the route that the MISS MEGAN had taken prior to the accident. No AIS tracking information was available for this route surveyed. The third area scanned was from the location of the accident along a given AIS track (1100' wide by 3500' long). Side-scan sonar imagery for the area surveyed is indicated in Figure 3.

The results of the data collected using the single beam echosounder indicate that the tide corrected MLLW water depths in the vicinity of the accident range between 6 feet to 7 feet. In response to a request from the NTSB, Figure 4 was generated.

Received e-mail, below, from Morgan Turrell, NTSB on October 22, 2006:

----- Original Message -----

From: Turrell Morgan <morgan.turrell@ntsb.gov>  
Date: Sunday, October 22, 2006 1:51 pm  
Subject: Re: Survey and Track Data



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Tim, can you ask your folks doing the data if there are any areas in the immediate area less than 7 feet water depth? I need to rule out the tug with a draft of 6 feet hitting any thing.  
Thanks

----- Original Message -----

From: Tim.Osborn@noaa.gov <Tim.Osborn@noaa.gov>  
To: jeffrey.w.johnson@uscg.mil <jeffrey.w.johnson@uscg.mil>; Turrell Morgan  
Cc: Ed.Martin@noaa.gov <Ed.Martin@noaa.gov>; Kane, Gary M. [Gary Kane] GKAA@chevron.com; Marcotte, Thomas (marcotte) marcotte@chevron.com  
Sent: Sun Oct 22 13:09:20 2006  
Subject: Survey and Track Data

Jeff

Fugro is still looking for the AIS track information of Miss Megan that they will then lay into the graphics of the surveys.

Can you confirm for them that the information is coming so they can plan for this as they work on the imagery?

Thank you.

Tim

Overall, propeller scarring from twin-screw vessels has occurred within the area surveyed. This common scarring appears as pairs of lines in which the spacing does not change when turns are made (Figure 5). Please note that the two dark wide lines that run north/south are the sonar nadir. The nadir is the area directly below the side-scan sonar towfish in which void of data. At the scene of the accident specifically where the pipeline was ruptured, a depression in the seafloor has been formed. This circular depression is approximately 3.5 to 4.0 feet lower in elevation than that of the normal seafloor elevation, which is probably a result from the explosion, can be identified by the increased contour lines near the tied-in pipeline. Noted within the side-scan imagery, Figure 5, were several sets of parallel scars near the damaged ATHENA spud barge. These northwest/southeast drag marks could possibly be a result of a recovery operation.

Obtained through USCG, the AIS tracking data (Appendix B) during the time that the accident contained no record of the MISS MEGAN at the location of the accident (Figure 6). Although there was a vessel named the MISS MEGAN within the records it was not the MISS MEGAN involved in the accident as stated below:

Received e-mail, below, from LT John Luff, Investigations Division, MSU Morgan City, on November 12, 2006 (Appendix C).

"The track/positions plotted for the MISS MEGAN (ON# 1048911) in the attached document is for the wrong MISS MEGAN (ON# 599049), the one plotted was for the 15 meter long 77 ton tug



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owned by Louisiana Marine Towing, LLC. It just happened that both MISS MEGANs were in the western part of our AOR outside the AIS charted areas at the same time. I had Mr Peters in VTS look at the AIS data for the date of the incident, and there is no data for our MISS MEGAN for that day or even the day before. Either their AIS was not functioning or it was turned off.”

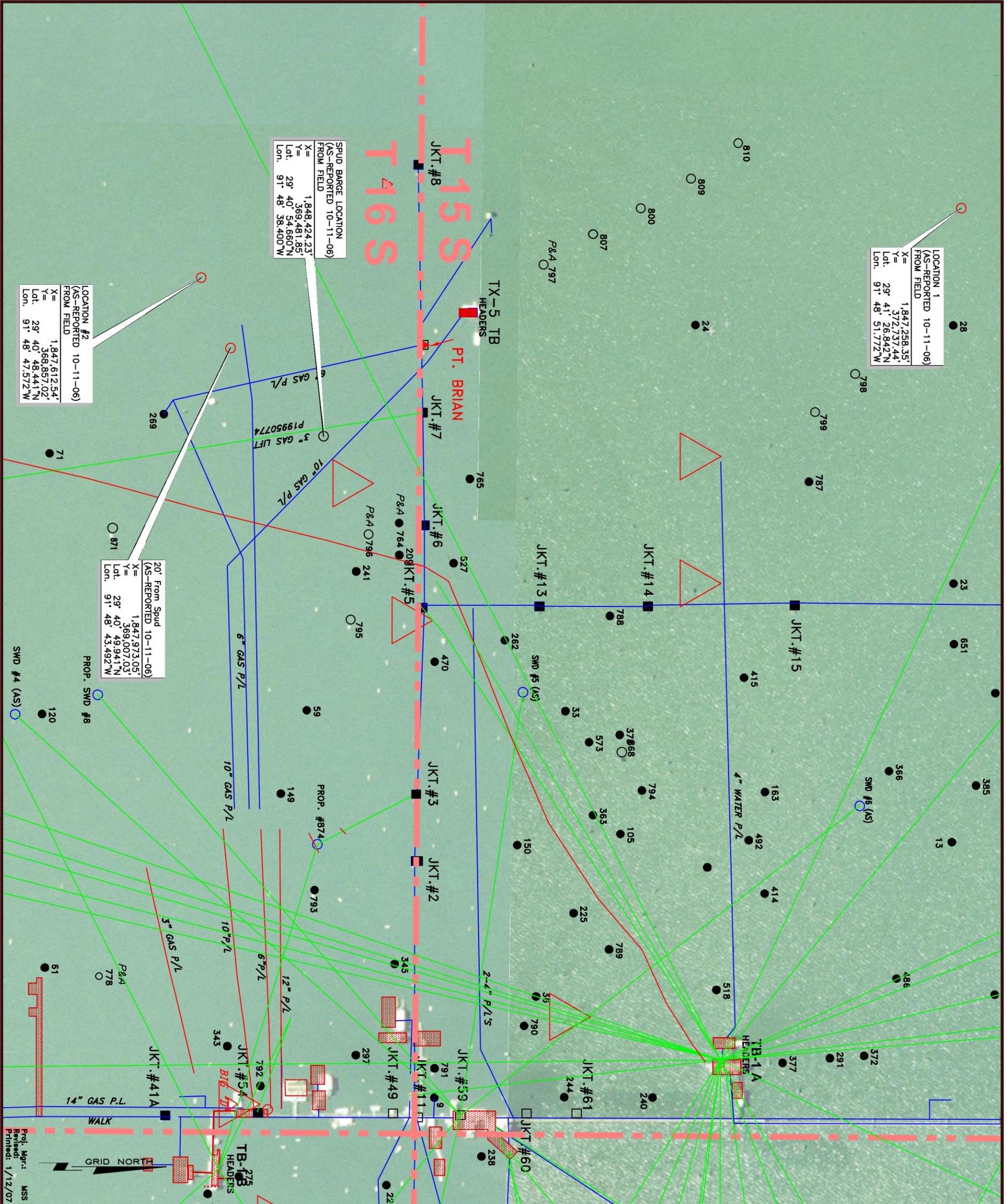
In order to determine the validity of the AIS tracking data that was given to JCLS, a comparison between propeller scarring and the AIS tracking data was made. The MISS JOANNE AIS track was overlaid onto the side-scan sonar imagery as shown in Figure 7. Within the imagery there is propeller scarring that matches that of the MISS JOANNE AIS tracking data and therefore concludes that the pairing of propeller scarring and AIS tracking data is valid.

### **SUMMARY**

In summary, without having the AIS track of the MISS MEGAN and the scarring from other vessels within the area surveyed, it is not likely to be absolutely sure of which propeller scars are associated with the MISS MEGAN or if the ATHENA barge was dragging an object which may have snagged the pipeline. Additionally, the depression in the seafloor near the pipeline has disturbed the natural bottom significantly enough that a determination of the ATHENA barge dragging an object, which may have caused the pipeline to rupture, cannot be made.



**Figure 1. Vicinity Map**



LOCATION 1  
(AS-REPORTED 10-11-06)  
FROM FIELD  
X= 1,847,258.35'  
Y= 372,737.44'  
Lat. 29° 48' 51.772"W  
Lon. 91° 48' 51.772"W

SPUD BARGE LOCATION  
(AS-REPORTED 10-11-06)  
FROM FIELD  
X= 1,848,424.23'  
Y= 369,481.85'  
Lat. 29° 48' 54.660"N  
Lon. 91° 48' 38.400"W

LOCATION #2  
(AS-REPORTED 10-11-06)  
FROM FIELD  
X= 1,847,612.54'  
Y= 368,857.02'  
Lat. 29° 48' 48.441"N  
Lon. 91° 48' 47.572"W

20' From Spud  
(AS-REPORTED 10-11-06)  
X= 1,847,973.05'  
Y= 369,007.03'  
Lat. 29° 48' 49.941"N  
Lon. 91° 48' 43.492"W

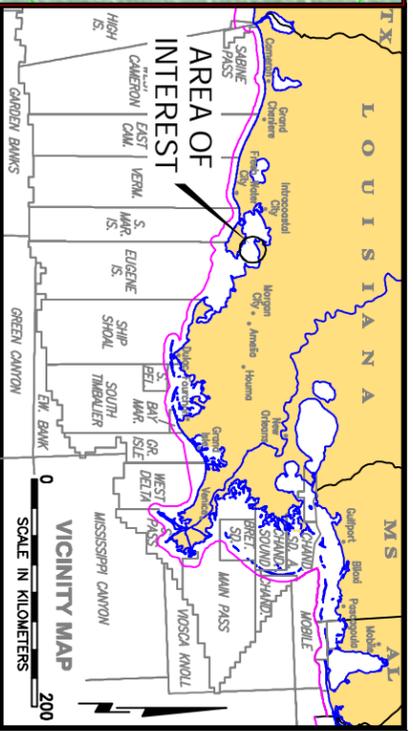


Figure #1 Page #6

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**JACKUP RIG VICINITY LOCATION  
BASE MAP**

WEST COTE BLANCH BAY  
OIL AND GAS FIELD  
ST. MARY PARISH, LOUISIANA

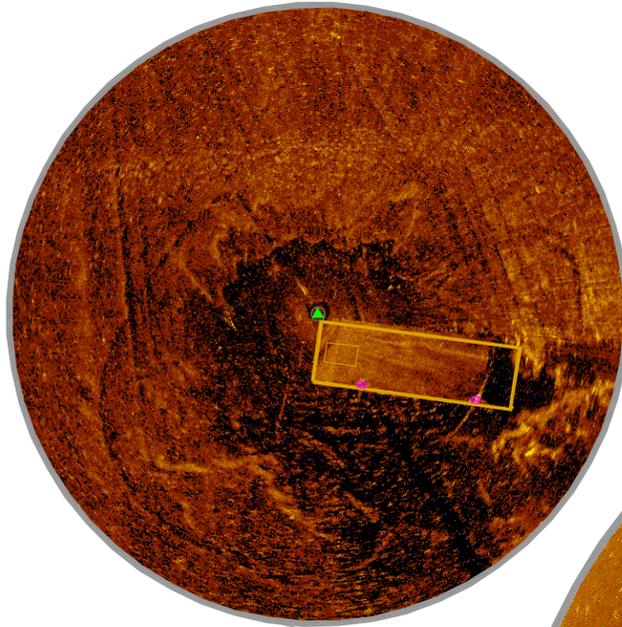
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GEODETIC DATUM: NAD27	SCALE	0	500'
PROJECTION: LOUISIANA SOUTH	IN FEET		
GRID UNITS: US SURVEY FEET			
Job No.: 06-0000	Date: 10/12/06	Dwnr: MSS	Chart: 1 of 1
Dwgfile: L:\2006\060654\CAD\AM060654-rev			

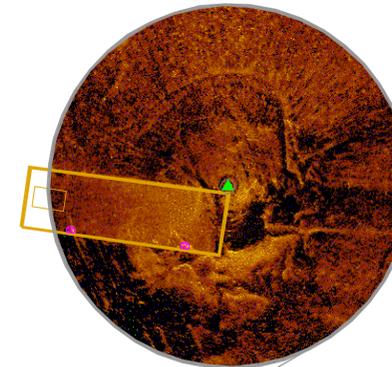


**Figure 2 Scanning Sonar Map**

INSET



INSET



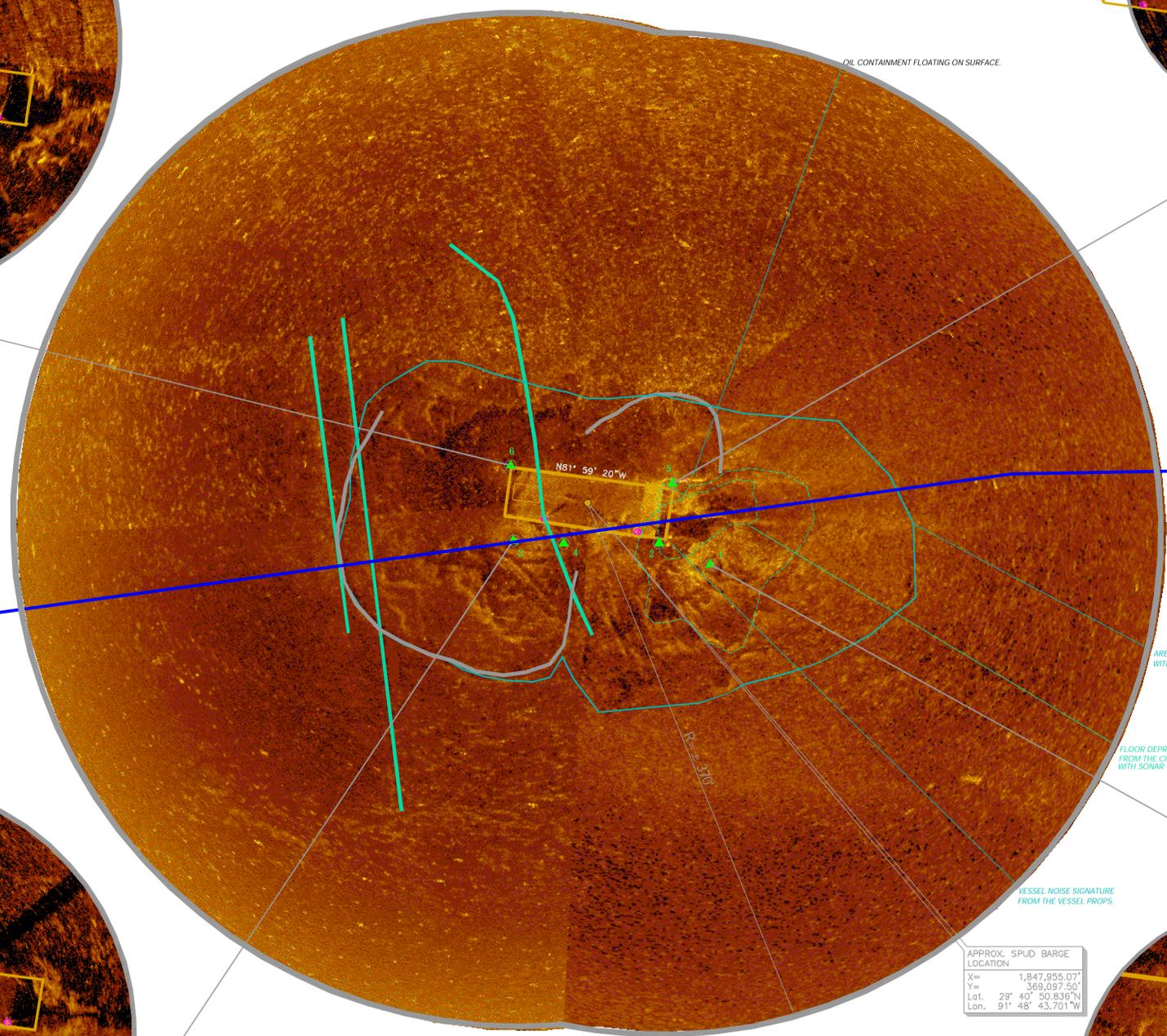
**CONFIDENTIAL**

### Scanning Sonar Mosaic Figure #2 Page #7

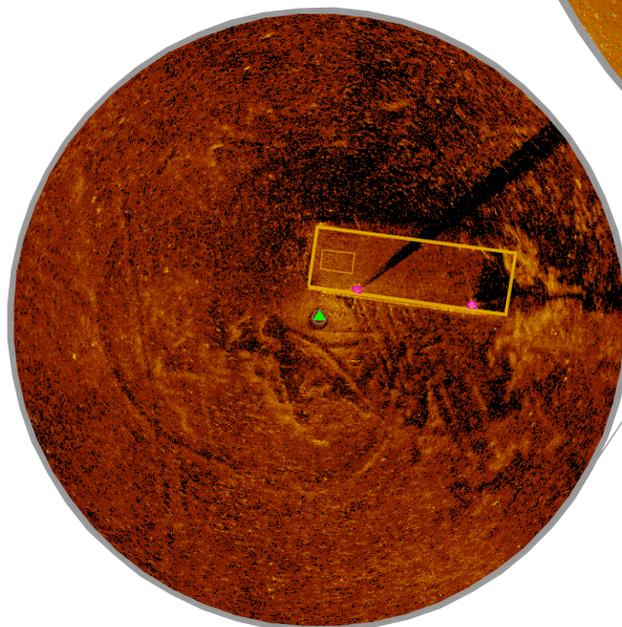


#### SCANNING SONAR COORDINATES

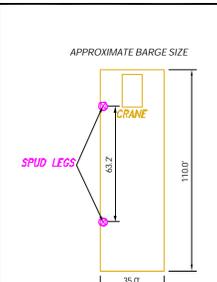
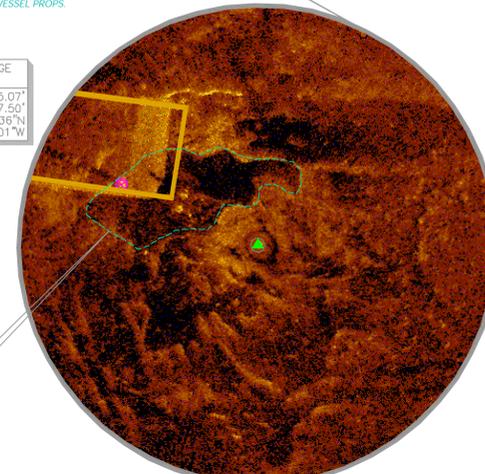
DROP #	X COORDINATE	Y COORDINATE	LATITUDE	LONGITUDE
1	1,848,037.43'	369,056.28'	29° 40' 50.431"N	91° 48' 42.765"W
2	1,848,003.10'	369,070.48'	29° 40' 50.570"N	91° 48' 43.155"W
3	1,847,905.28'	369,072.09'	29° 40' 50.582"N	91° 48' 44.284"W
4	1,847,939.04'	369,070.37'	29° 40' 50.566"N	91° 48' 43.881"W
5	1,848,012.20'	369,110.66'	29° 40' 50.968"N	91° 48' 43.054"W
6	1,847,903.47'	369,122.38'	29° 40' 51.080"N	91° 48' 44.287"W



INSET



INSET



- NOTE:
- 1) SIZE, POSITION AND ORIENTATION OF SPUD BARGE TAKEN FROM JCLS FIELD DATA DATED 10/17/06.
  - 2) DENOTES SCANNING SONAR DROP LOCATIONS 10/17/03.
  - 3) DENOTES SCANNING SONAR LINEAR FEATURE INDICATING POSSIBLE SPUD BARGE LEGS DRAGGING ON TO THE FLOOR.
  - 4) DENOTES SCANNING SONAR LINEAR FEATURE SIGNATURES.

APPROX. SPUD BARGE LOCATION  
 X= 1,847,955.07'  
 Y= 369,097.50'  
 Lat. 29° 40' 50.836"N  
 Lon. 91° 48' 43.701"W

AREA IS ±1556' FT  
 PERMEIETER IS 193' FT

NOT TO SCALE



### SITE INVESTIGATION ASSESSMENT NEAR CHEVRON 8" PIPELINE

WEST COTE BLANCHE  
ST MARTIN PARISH LOUISIANA



GEODETTIC DATUM: NAD27  
 PROJECTION: LOUISIANA SOUTH  
 GRID UNITS: US SURVEY FEET

FEET SCALE: 0 50' 100'  
 MILES SCALE: 0 0.005 0.010 0.015 0.020

Issue No.	Date	Description	Inter	Drwn	Chkd	Aprv
1	10/17/06	FIRST ISSUE		AS		

Job No.: 06-0654  
 Dwgfile: L:\2006\060654\CAD\SS060654

Chart: 1 Of: 1

Printed: 1/17/07



**Figure 3 Sonar Base Map**

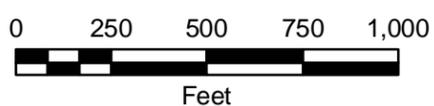


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FIGURE 3 - Side-Scan Sonar Coverage Map  
West Cote Blanche Bay  
St. Mary Parish, Louisiana

- Side scan sonar imagery and bathymetry data collected on October 20, 2006.
- Bathymetry data is Tide Corrected and represents MLLW.
- Geodetic datum - NAD 27 State Plane, Louisiana South.

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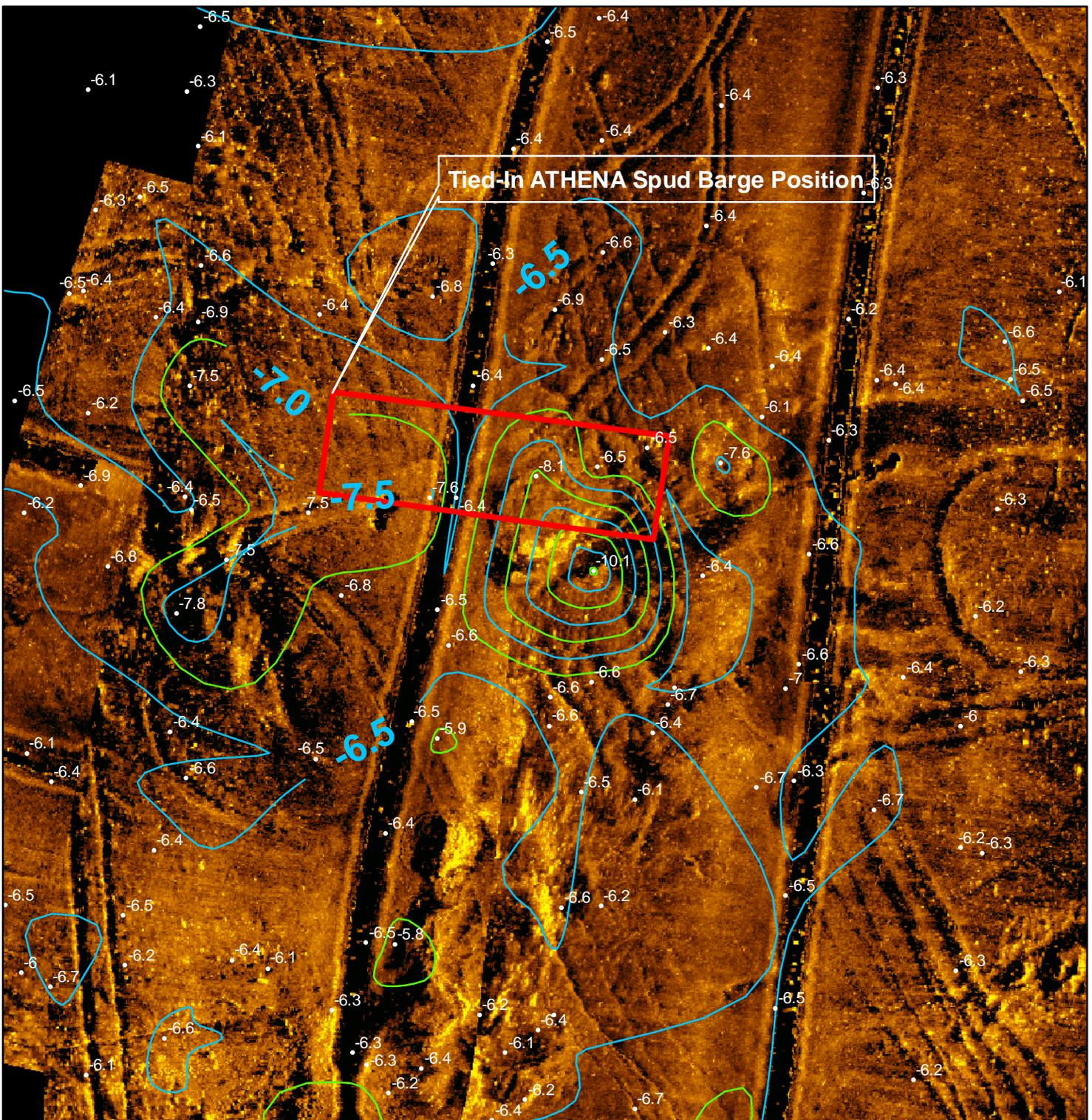
**4**

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**Figure 4 Bathymetry Map**



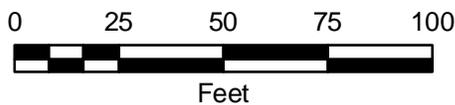
**CHEVRON USA**

FIGURE 4 - Bathymetry Contour Map  
West Cote Blanche Bay  
St. Mary Parish, Louisiana

- Side scan sonar imagery and bathymetry data collected on October 20, 2006.
- Bathymetry data is Tide Corrected and represents MLLW.
- Geodetic datum - NAD 27 State Plane, Louisiana South.

4

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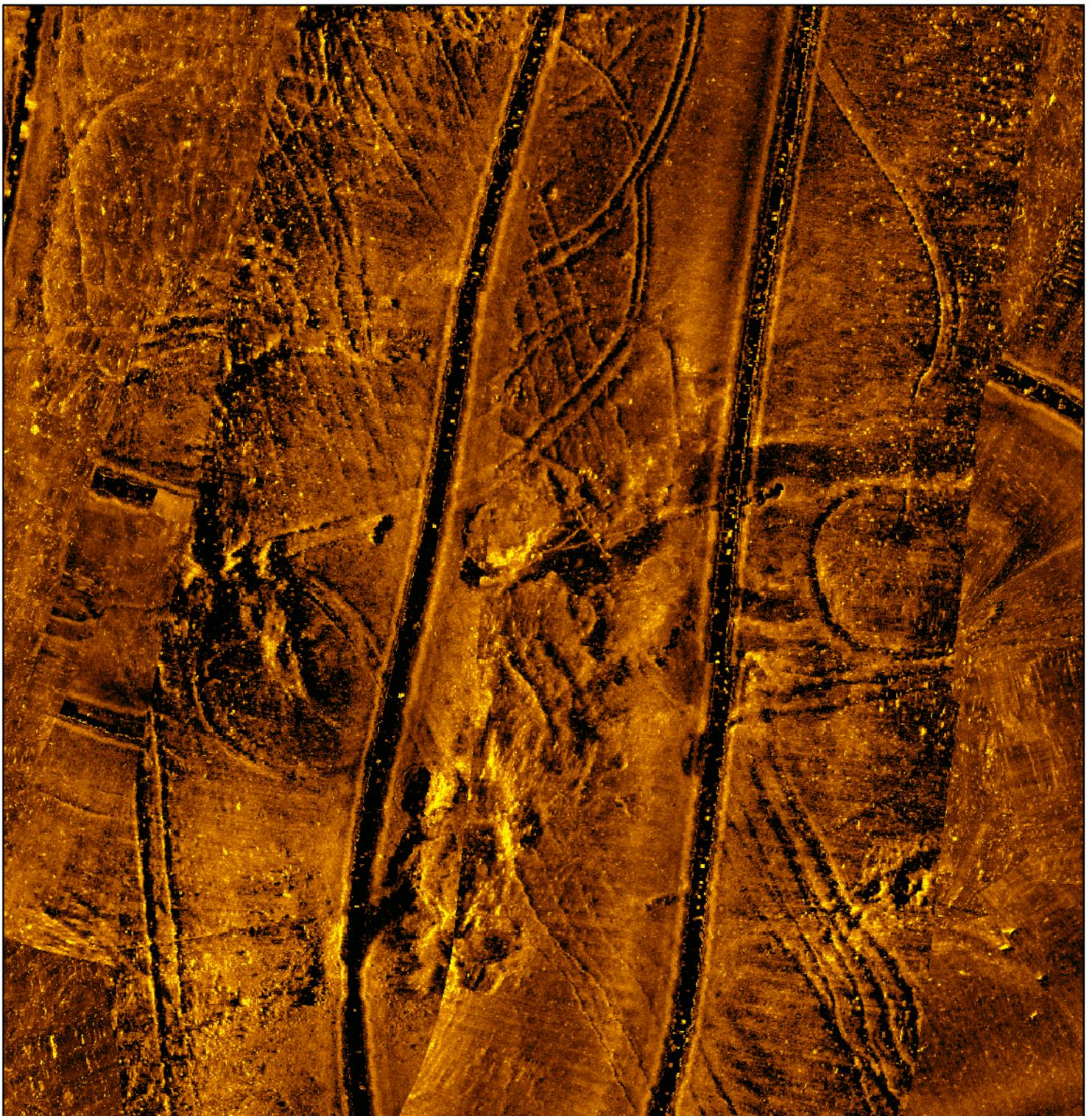


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**Figure 5 Sonar Detail**



**CHEVRON USA**

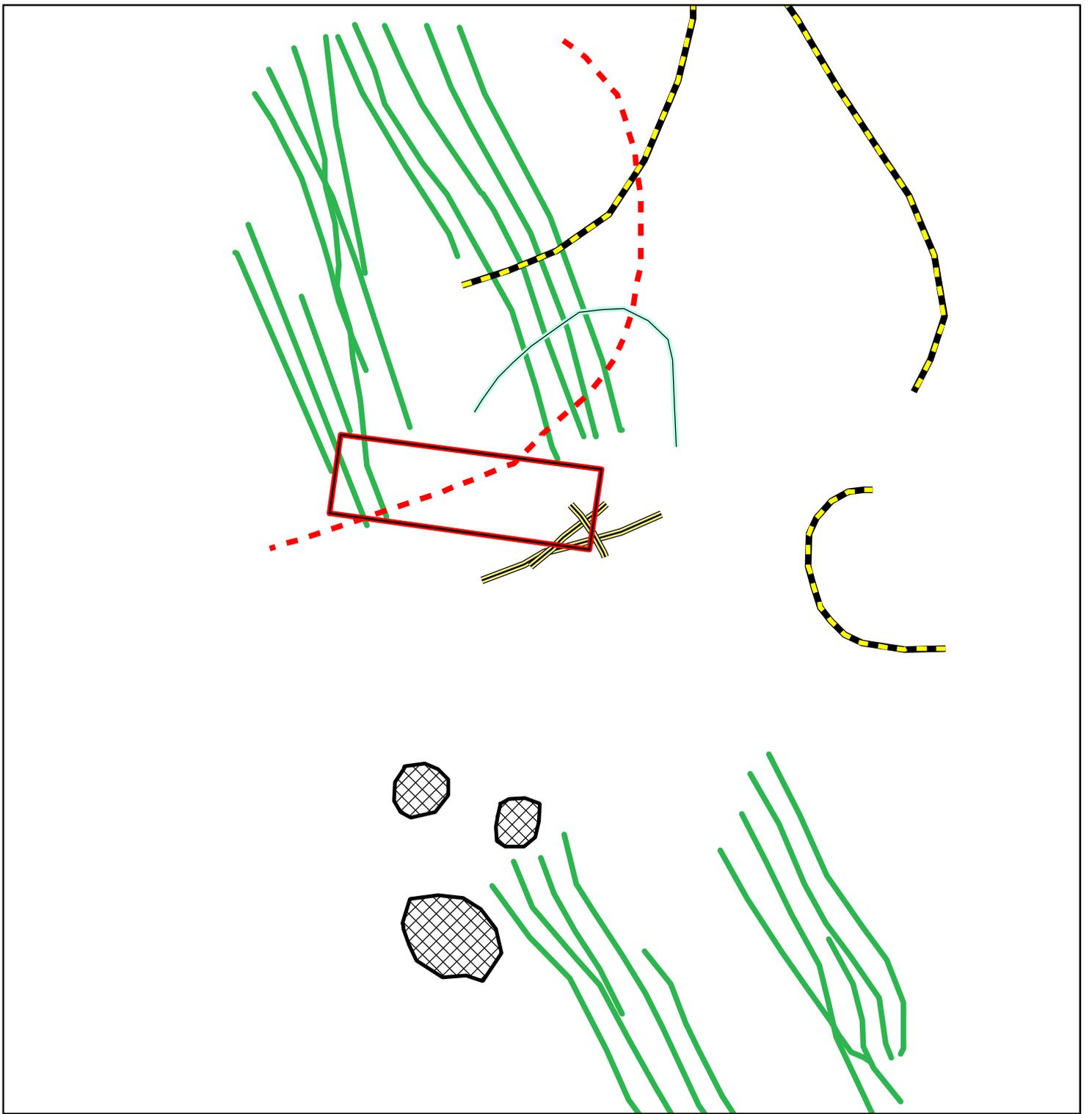
FIGURE 5 - Detail of Propeller Scars  
 West Cote Blanche Bay  
 St. Mary Parish, Louisiana

4

- Side scan sonar imagery and bathymetry data collected on October 20, 2006.
- Geodetic datum - NAD 27 State Plane, Louisiana South.

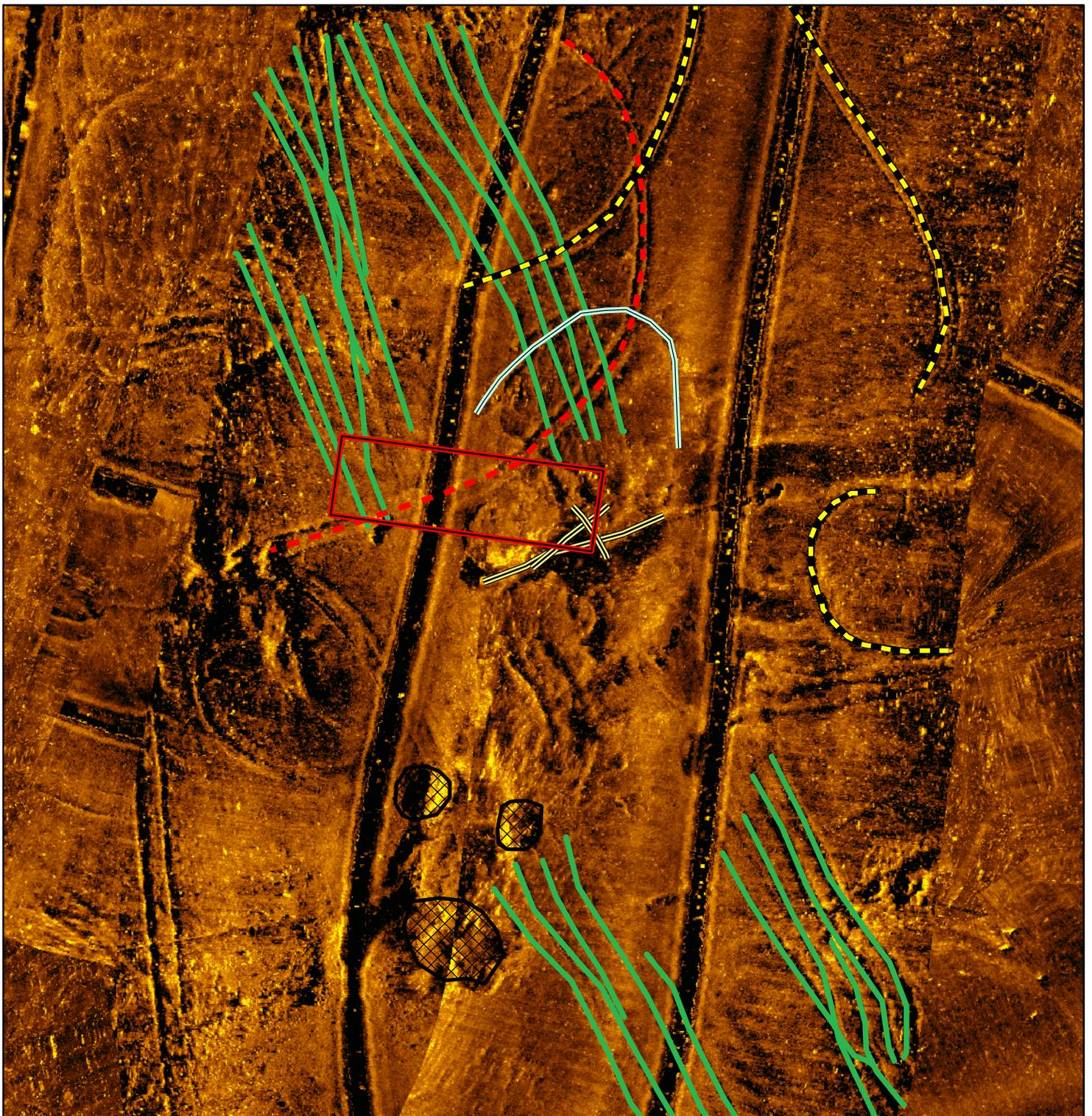
**Legend**

-  Tied-In ATHENA Spud Barge Position
-  Unknown Linear Scarring
-  Propeller Scarring (Recovery)
-  Unknown Scarring
-  Pipelines
-  Propeller Scarring
-  Spud Barge Can Holes





**Figure 5 a Sonar Detail**



**CHEVRON USA**

FIGURE 5a - Detail of Propeller Scars  
 West Cote Blanche Bay  
 St. Mary Parish, Louisiana

4

- Side scan sonar imagery and bathymetry data collected on October 20, 2006.
- Geodetic datum - NAD 27 State Plane, Louisiana South.

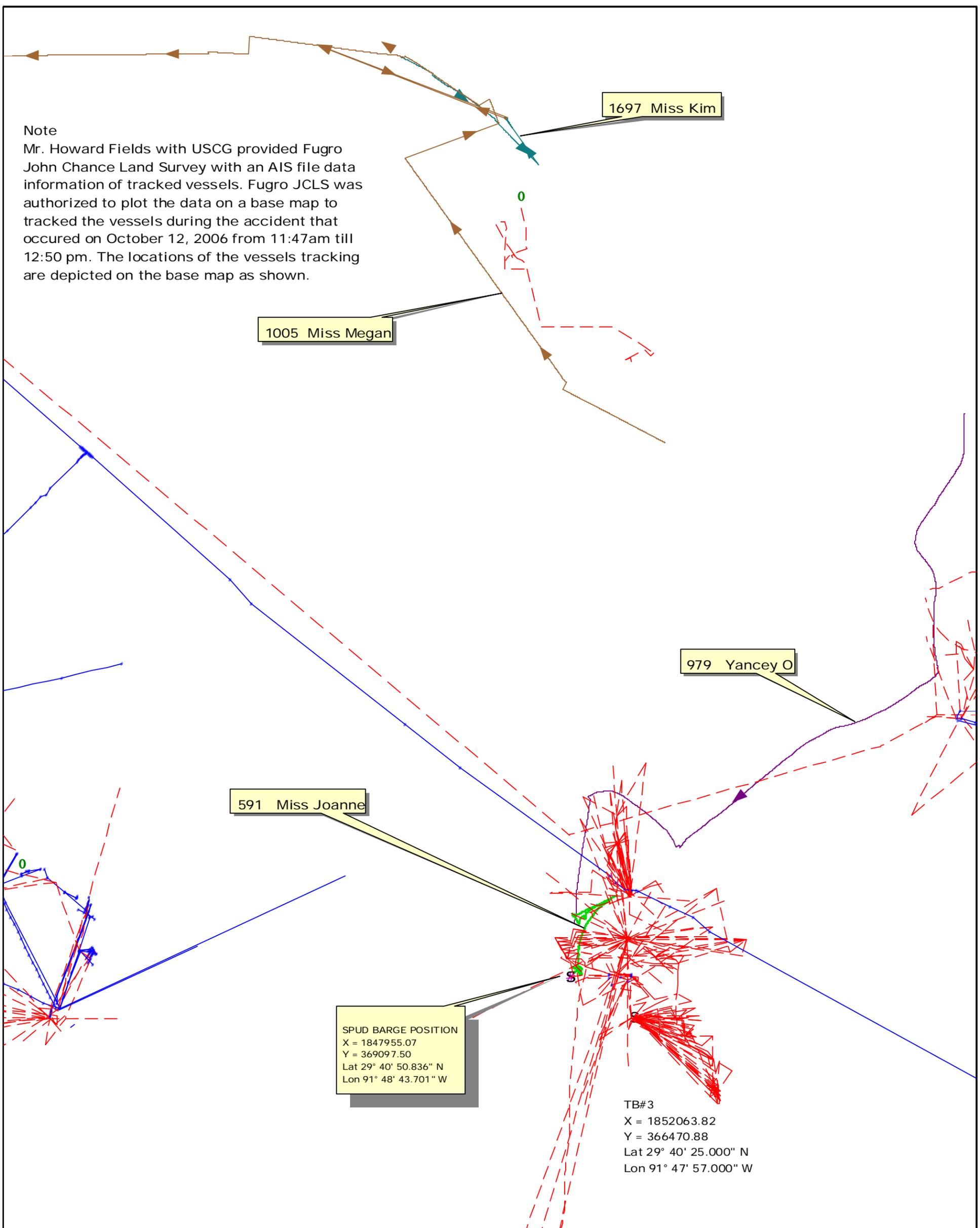
**Legend**

- Tied-In ATHENA Spud Barge Position
- Unknown Linear Scarring
- Propeller Scarring (Recovery)
- Unknown Scarring
- Pipelines
- Propeller Scarring
- Spud Barge Can Holes



**Figure 6 AIS Base**

Note  
 Mr. Howard Fields with USCG provided Fugro John Chance Land Survey with an AIS file data information of tracked vessels. Fugro JCLS was authorized to plot the data on a base map to tracked the vessels during the accident that occurred on October 12, 2006 from 11:47am till 12:50 pm. The locations of the vessels tracking are depicted on the base map as shown.



1697 Miss Kim

1005 Miss Megan

979 Yancey O

591 Miss Joanne

SPUD BARGE POSITION  
 X = 1847955.07  
 Y = 369097.50  
 Lat 29° 40' 50.836" N  
 Lon 91° 48' 43.701" W

TB#3  
 X = 1852063.82  
 Y = 366470.88  
 Lat 29° 40' 25.000" N  
 Lon 91° 47' 57.000" W



BASE MAP  
 POST PLOT OF TRACKED VESSELS  
 WEST COTE BLANCHE  
 ST MARY PARISH LOUISIANA  
 Figure #6 Page #12



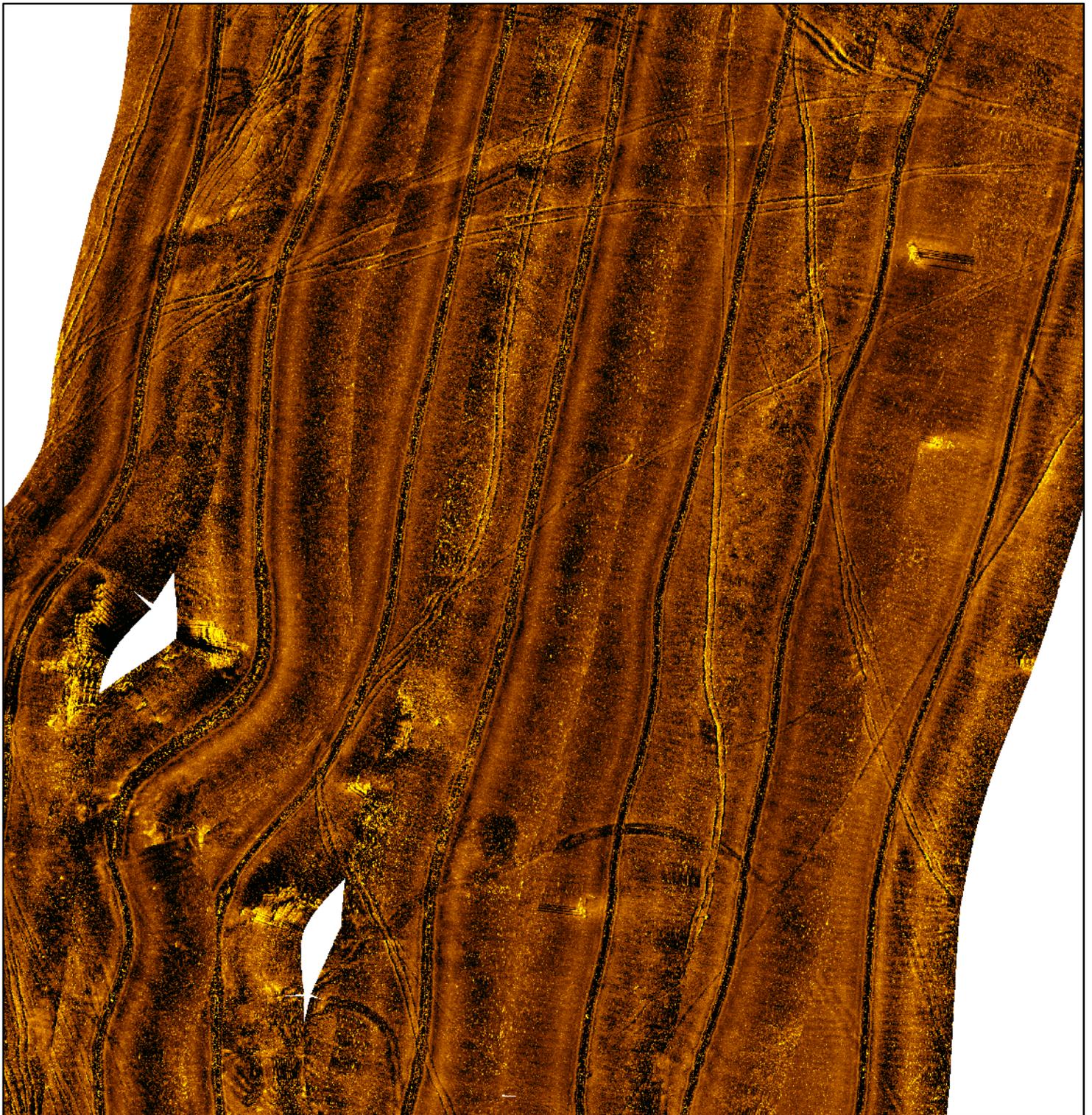
0 6000 Feet  
 GEODETIC DATUM: NAD 1927  
 ELLIPSOID: CLARKE 1866  
 PROJECTION: LAMBERT  
 ZONE: LOUISIANA, SOUTH  
 GRID UNITS: US SURVEY FEET

Job No.: 0	File: 060654apr.apr (Layout3)	SHEET NO. 1 OF 1
By: ADRIAN SALAS	PRINT: January 11, 2007	

A MEMBER OF THE FUGRO GROUP OF COMPANIES



**Figure 7 AIS Validation**

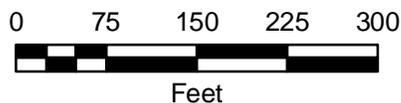


## **CHEVRON USA**

FIGURE 7 - Detail of AIS Validation  
West Cote Blanche Bay  
St. Mary Parish, Louisiana

- Side scan sonar imagery and bathymetry data collected on October 20, 2006.
- Geodetic datum - NAD 27 State Plane, Louisiana South.

**JOHN CHANCE**  
LAND SURVEYS, INC.



### IMPORTANT - PLEASE NOTE

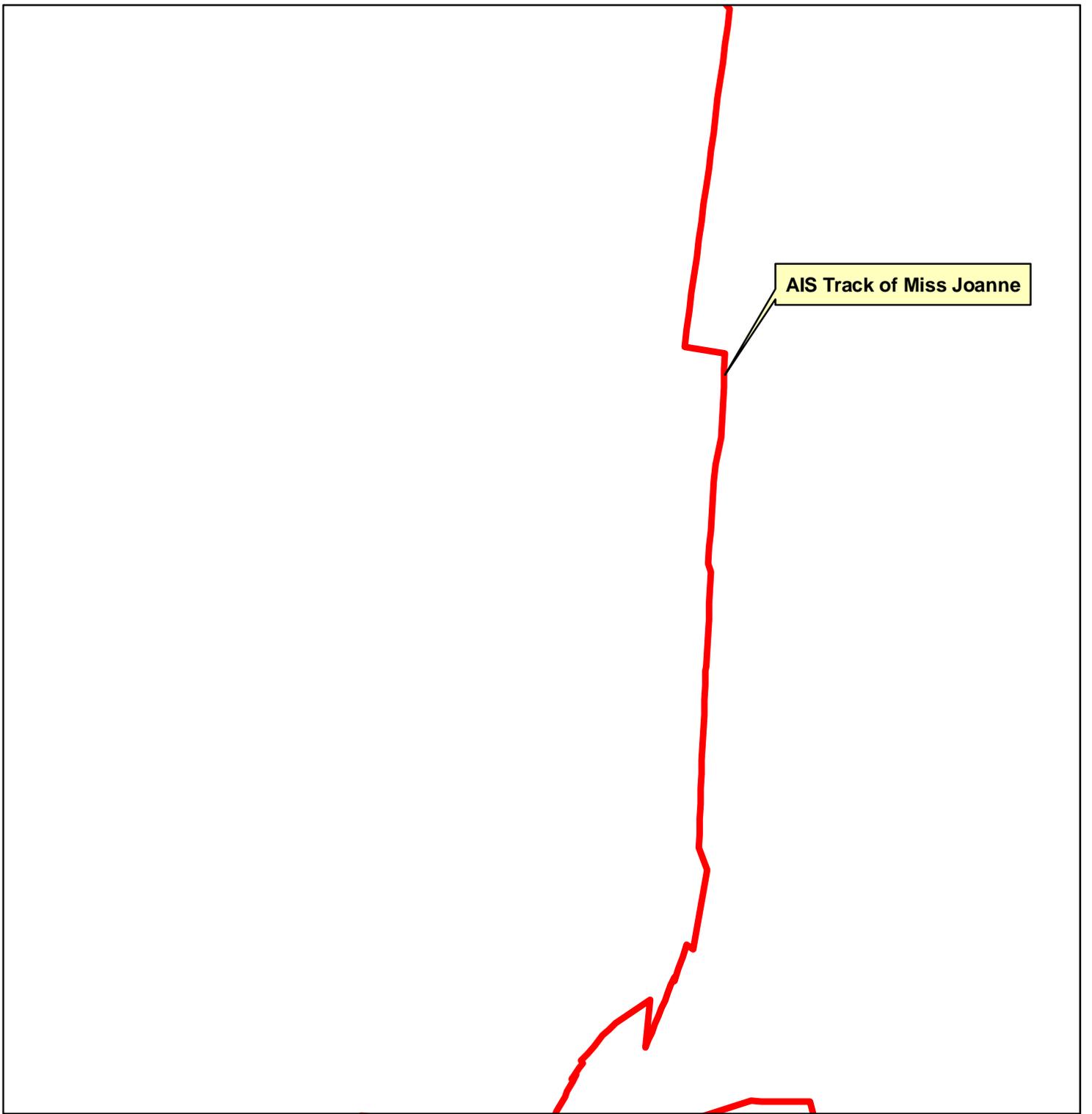
# 4

1) THIS MAP IS FURNISHED TO CHEVRON USA FOR ITS EXCLUSIVE USE, AND CHEVRON USA AGREES THAT THE MAP WILL NOT BE TRANSFERRED OR CONVEYED TO ANY PERSON OR ENTITY OTHER THAN ITS PARTNERS AND CONTRACTORS FOR ANY PURPOSE OTHER THAN USE IN CONNECTION WITH SERVICES PERFORMED FOR CHEVRON USA.

2) THIS MAP HAS BEEN PREPARED ON THE BASIS OF INFORMATION DERIVED FROM VARIOUS SOURCES AND SURVEYS PREPARED BY OTHER PERSONS AND ENTITIES; MOREOVER, THE SERVICES PROVIDED IN THE PREPARATION OF THIS MAP INVOLVE INTERPRETATION, JUDGMENT AND OPINION BASED UPON INFERENCES FROM INEXACT DATA AND ON SOURCES OF INFORMATION SUPPLIED BY OTHER PERSONS OR ENTITIES FOR WHOM JOHN CHANCE LAND SURVEYS, INC. IS NOT RESPONSIBLE. ADDITIONALLY, THIS MAP DOES NOT REFLECT CHANGES IN THE LOCATION OF PIPELINES, UMBILICALS, CABLES AND OTHER SEA BOTTOM ASSETS WHICH MAY HAVE BEEN OCCASIONED BY (i) IMPACTS WITH VESSELS, ANCHORS, CABLE OR OTHER FLOATING OR SUBSEA OBJECTS, OR (ii) NATURALLY OCCURRING EVENTS (e.g., TROPICAL STORMS, HURRICANES, MUDSLIDES AND COMPARABLE PHENOMENA). BY REASON OF THE FOREGOING CHEVRON USA AGREES BY ITS ACCEPTANCE AND USE OF THIS MAP THAT JOHN CHANCE LAND SURVEYS, INC. HAS NO RESPONSIBILITY OR LIABILITY FOR THE CONSEQUENCES OF ANY INACCURACY OR EFFICIENCY IN THE MAP.

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4) JOHN CHANCE LAND SURVEYS, INC. WAS NOT APPRISED OF THE PRECISE PURPOSE FOR WHICH THIS MAP WOULD BE UTILIZED. JOHN CHANCE LAND SURVEYS, INC. MAY HAVE PERFORMED A SHALLOW HAZARD SURVEY, HOWEVER, THIS MAP SHOULD NOT BE DEEMED TO CONSTITUTE RECOMMENDATIONS, EXPLICIT OR IMPLICIT, FOR ANY USE OR PURPOSE WHATSOEVER.



AIS Track of Miss Joanne

APPENDIX A – PHOTOGRAPHS



ATHENA Spud Barge - View Facing West



ATHENA Spud Barge - View Facing Northeast



ATHENA Spud Barge - View Facing East



ATHENA Spud Barge



ATHENA Spud Barge



# JOHN CHANCE LAND SURVEYS, INC.

## APPENDIX B – AIS TRACK COORDINATES

29 46.5712 N	91 47.6039 W	Oct-12-06 11:00:02	40 29 41.7308 N	91 48.1784 W	Oct-12-06 11:06:59
2 29 46.5712 N	91 47.6039 W	Oct-12-06 11:00:02	41 29 41.7307 N	91 48.1785 W	Oct-12-06 11:07:08
3 29 46.8971 N	91 43.9483 W	Oct-12-06 11:00:08	42 29 46.7313 N	91 43.9563 W	Oct-12-06 11:07:38
4 29 41.7234 N	91 48.1781 W	Oct-12-06 11:00:08	43 29 41.7303 N	91 48.1786 W	Oct-12-06 11:07:38
5 29 46.8975 N	91 43.9489 W	Oct-12-06 11:00:26	44 29 46.7182 N	91 43.9568 W	Oct-12-06 11:07:47
6 29 41.7234 N	91 48.1778 W	Oct-12-06 11:00:29	45 29 41.7307 N	91 48.1782 W	Oct-12-06 11:07:59
7 29 46.8981 N	91 43.9498 W	Oct-12-06 11:00:47	46 29 46.6779 N	91 43.9564 W	Oct-12-06 11:08:17
8 29 41.7236 N	91 48.1772 W	Oct-12-06 11:00:59	47 29 41.7308 N	91 48.1779 W	Oct-12-06 11:08:17
9 29 46.898 N	91 43.9525 W	Oct-12-06 11:01:17	48 29 41.7305 N	91 48.1787 W	Oct-12-06 11:09:29
10 29 41.7275 N	91 48.1775 W	Oct-12-06 11:01:20	49 29 41.7304 N	91 48.1786 W	Oct-12-06 11:09:47
11 29 41.7298 N	91 48.1785 W	Oct-12-06 11:01:29	50 29 46.5522 N	91 43.9576 W	Oct-12-06 11:09:59
12 29 41.7309 N	91 48.1779 W	Oct-12-06 11:01:38	51 29 46.5416 N	91 43.9578 W	Oct-12-06 11:10:08
13 29 46.8979 N	91 43.9546 W	Oct-12-06 11:01:47	52 29 41.7304 N	91 48.1787 W	Oct-12-06 11:10:17
14 29 41.7304 N	91 48.1782 W	Oct-12-06 11:01:59	53 29 46.5163 N	91 43.959 W	Oct-12-06 11:10:29
15 29 46.8976 N	91 43.956 W	Oct-12-06 11:02:17	54 29 46.5042 N	91 43.9598 W	Oct-12-06 11:10:38
16 29 46.8978 N	91 43.9557 W	Oct-12-06 11:02:26	55 29 47.2154 N	91 48.8227 W	Oct-12-06 11:10:41
17 29 41.7303 N	91 48.1783 W	Oct-12-06 11:02:29	56 29 46.4924 N	91 43.9604 W	Oct-12-06 11:10:47
18 29 41.7302 N	91 48.1785 W	Oct-12-06 11:02:41	57 29 46.4808 N	91 43.9605 W	Oct-12-06 11:10:59
19 29 46.8981 N	91 43.9563 W	Oct-12-06 11:02:47	58 29 46.4703 N	91 43.9605 W	Oct-12-06 11:11:08
20 29 41.7304 N	91 48.1785 W	Oct-12-06 11:02:47	59 29 46.4587 N	91 43.9613 W	Oct-12-06 11:11:17
21 29 41.7307 N	91 48.1784 W	Oct-12-06 11:02:59	60 29 47.2731 N	91 48.877 W	Oct-12-06 11:11:23
22 29 41.7306 N	91 48.178 W	Oct-12-06 11:03:20	61 29 46.4459 N	91 43.9636 W	Oct-12-06 11:11:29
23 29 41.7301 N	91 48.178 W	Oct-12-06 11:03:38	62 29 46.4344 N	91 43.9666 W	Oct-12-06 11:11:38
24 29 41.7302 N	91 48.1784 W	Oct-12-06 11:04:11	63 29 46.4228 N	91 43.9706 W	Oct-12-06 11:11:47
25 29 41.7302 N	91 48.1785 W	Oct-12-06 11:04:20	64 29 46.4115 N	91 43.9757 W	Oct-12-06 11:11:59
26 29 41.7301 N	91 48.1786 W	Oct-12-06 11:04:38	65 29 41.7303 N	91 48.1787 W	Oct-12-06 11:11:59
27 29 46.8795 N	91 43.9538 W	Oct-12-06 11:04:47	66 29 46.4012 N	91 43.9804 W	Oct-12-06 11:12:08
28 29 41.7304 N	91 48.179 W	Oct-12-06 11:04:59	67 29 41.7302 N	91 48.1786 W	Oct-12-06 11:12:08
29 29 41.7303 N	91 48.1787 W	Oct-12-06 11:05:08	68 29 46.39 N	91 43.9848 W	Oct-12-06 11:12:17
30 29 41.7303 N	91 48.1787 W	Oct-12-06 11:05:20	69 29 41.7299 N	91 48.1786 W	Oct-12-06 11:12:17
31 29 46.8535 N	91 43.9534 W	Oct-12-06 11:05:26	70 29 46.378 N	91 43.99 W	Oct-12-06 11:12:29
32 29 46.8451 N	91 43.953 W	Oct-12-06 11:05:38	71 29 46.3671 N	91 43.9944 W	Oct-12-06 11:12:38
33 29 41.7304 N	91 48.1792 W	Oct-12-06 11:05:38	72 29 46.3562 N	91 43.9993 W	Oct-12-06 11:12:47
34 29 46.8375 N	91 43.9526 W	Oct-12-06 11:05:47	73 29 46.3457 N	91 44.0056 W	Oct-12-06 11:12:59
35 29 41.7305 N	91 48.1791 W	Oct-12-06 11:05:47	74 29 46.3258 N	91 44.0194 W	Oct-12-06 11:13:17
36 29 46.8299 N	91 43.9527 W	Oct-12-06 11:05:56	75 29 41.73 N	91 48.1784 W	Oct-12-06 11:13:17
37 29 46.8149 N	91 43.9535 W	Oct-12-06 11:06:17	76 29 46.3162 N	91 44.0265 W	Oct-12-06 11:13:26
38 29 41.731 N	91 48.1783 W	Oct-12-06 11:06:38	77 29 46.3073 N	91 44.034 W	Oct-12-06 11:13:38
39 29 46.7916 N	91 43.9541 W	Oct-12-06 11:06:47	78 29 46.3 N	91 44.0397 W	Oct-12-06 11:13:47



# JOHN CHANCE LAND SURVEYS, INC.

79 29 46.2838 N	91 44.051 W	Oct-12-06 11:14:17	119 29 45.8731 N	91 44.3595 W	Oct-12-06 11:20:56
80 29 46.278 N	91 44.0546 W	Oct-12-06 11:14:26	120 29 41.7301 N	91 48.1814 W	Oct-12-06 11:20:59
81 29 46.2702 N	91 44.0594 W	Oct-12-06 11:14:38	121 29 45.8594 N	91 44.37 W	Oct-12-06 11:21:05
82 29 46.2612 N	91 44.0649 W	Oct-12-06 11:14:47	122 29 45.844 N	91 44.382 W	Oct-12-06 11:21:17
83 29 46.2512 N	91 44.0716 W	Oct-12-06 11:14:59	123 29 41.7246 N	91 48.1999 W	Oct-12-06 11:21:20
84 29 46.2297 N	91 44.0872 W	Oct-12-06 11:15:17	124 29 45.8312 N	91 44.3921 W	Oct-12-06 11:21:26
85 29 41.7308 N	91 48.1784 W	Oct-12-06 11:15:20	125 29 41.7203 N	91 48.2104 W	Oct-12-06 11:21:29
86 29 46.2191 N	91 44.0959 W	Oct-12-06 11:15:26	126 29 45.8152 N	91 44.4045 W	Oct-12-06 11:21:38
87 29 46.2085 N	91 44.1043 W	Oct-12-06 11:15:38	127 29 41.7162 N	91 48.2188 W	Oct-12-06 11:21:38
88 29 46.1879 N	91 44.1207 W	Oct-12-06 11:15:59	128 29 45.8003 N	91 44.4157 W	Oct-12-06 11:21:47
89 29 46.1786 N	91 44.1278 W	Oct-12-06 11:16:05	129 29 45.787 N	91 44.4267 W	Oct-12-06 11:21:56
90 29 41.731 N	91 48.1788 W	Oct-12-06 11:16:11	130 29 45.7719 N	91 44.4392 W	Oct-12-06 11:22:05
91 29 46.1674 N	91 44.1365 W	Oct-12-06 11:16:17	131 29 41.6938 N	91 48.2705 W	Oct-12-06 11:22:29
92 29 41.7309 N	91 48.1787 W	Oct-12-06 11:16:20	132 29 45.7237 N	91 44.4771 W	Oct-12-06 11:22:38
93 29 46.1573 N	91 44.1446 W	Oct-12-06 11:16:26	133 29 50.3727 N	91 50.2678 W	Oct-12-06 11:22:41
94 29 50.6784 N	91 50.8579 W	Oct-12-06 11:16:29	134 29 45.7072 N	91 44.4885 W	Oct-12-06 11:22:47
95 29 46.1472 N	91 44.1528 W	Oct-12-06 11:16:38	135 29 45.6923 N	91 44.4983 W	Oct-12-06 11:22:56
96 29 41.7306 N	91 48.1785 W	Oct-12-06 11:16:38	136 29 41.6778 N	91 48.3008 W	Oct-12-06 11:22:59
97 29 46.137 N	91 44.1605 W	Oct-12-06 11:16:47	137 29 45.6751 N	91 44.5081 W	Oct-12-06 11:23:05
98 29 50.667 N	91 50.8246 W	Oct-12-06 11:16:50	138 29 50.3459 N	91 50.2189 W	Oct-12-06 11:23:11
99 29 46.1277 N	91 44.1672 W	Oct-12-06 11:16:56	139 29 41.6622 N	91 48.3349 W	Oct-12-06 11:23:29
100 29 46.1176 N	91 44.1749 W	Oct-12-06 11:17:05	140 29 50.3289 N	91 50.1872 W	Oct-12-06 11:23:29
101 29 46.1062 N	91 44.1833 W	Oct-12-06 11:17:17	141 29 45.6207 N	91 44.5311 W	Oct-12-06 11:23:38
102 29 50.6483 N	91 50.7739 W	Oct-12-06 11:17:20	142 29 50.3211 N	91 50.1733 W	Oct-12-06 11:23:41
103 29 46.0955 N	91 44.1914 W	Oct-12-06 11:17:26	143 29 45.6029 N	91 44.5363 W	Oct-12-06 11:23:47
104			144 29 45.5868 N	91 44.5402 W	Oct-12-06 11:23:56
105			145 29 45.5687 N	91 44.5436 W	Oct-12-06 11:24:05
106			146 29 41.6331 N	91 48.4022 W	Oct-12-06 11:24:29
107 29 46.0849 N	91 44.1994 W	Oct-12-06 11:17:38	147 29 50.2785 N	91 50.0916 W	Oct-12-06 11:24:29
108 29 41.7307 N	91 48.1788 W	Oct-12-06 11:17:38	148 29 45.5133 N	91 44.5487 W	Oct-12-06 11:24:38
109 29 46.0744 N	91 44.2073 W	Oct-12-06 11:17:47	149 29 45.4964 N	91 44.5467 W	Oct-12-06 11:24:47
110 29 46.065 N	91 44.2143 W	Oct-12-06 11:17:56	150 29 45.4803 N	91 44.5408 W	Oct-12-06 11:24:59
111 29 50.613 N	91 50.6906 W	Oct-12-06 11:18:11	151 29 41.6193 N	91 48.4358 W	Oct-12-06 11:24:59
112 29 46.0448 N	91 44.2307 W	Oct-12-06 11:18:17	152 29 41.6152 N	91 48.4469 W	Oct-12-06 11:25:08
113 29 46.0355 N	91 44.2385 W	Oct-12-06 11:18:26	153 29 50.2429 N	91 50.0296 W	Oct-12-06 11:25:11
114 29 41.7339 N	91 48.1781 W	Oct-12-06 11:18:38	154 29 41.6074 N	91 48.4695 W	Oct-12-06 11:25:29
115 29 46.0118 N	91 44.2576 W	Oct-12-06 11:18:56	155 29 50.2238 N	91 49.9992 W	Oct-12-06 11:25:29
116 29 46.0018 N	91 44.2636 W	Oct-12-06 11:19:05	156 29 45.4175 N	91 44.503 W	Oct-12-06 11:25:38
117 29 50.4884 N	91 50.4744 W	Oct-12-06 11:20:32	157 29 50.215 N	91 49.9861 W	Oct-12-06 11:25:41
118 29 45.8978 N	91 44.34 W	Oct-12-06 11:20:38	158 29 50.2039 N	91 49.9698 W	Oct-12-06 11:25:50



## JOHN CHANCE LAND SURVEYS, INC.

159 29 45.3873 N	91 44.4789 W	Oct-12-06 11:25:59	199 29 45.016 N	91 44.2956 W	Oct-12-06 11:29:47
160 29 50.195 N	91 49.9564 W	Oct-12-06 11:25:59	200 29 41.5112 N	91 48.7068 W	Oct-12-06 11:29:59
161 29 45.3725 N	91 44.4666 W	Oct-12-06 11:26:08	201 29 44.9421 N	91 44.3025 W	Oct-12-06 11:30:29
162 29 41.5902 N	91 48.5141 W	Oct-12-06 11:26:08	202 29 44.9237 N	91 44.3051 W	Oct-12-06 11:30:38
163 29 50.1842 N	91 49.9399 W	Oct-12-06 11:26:11	203 29 44.9057 N	91 44.3074 W	Oct-12-06 11:30:47
164 29 45.3594 N	91 44.455 W	Oct-12-06 11:26:17	204 29 41.5083 N	91 48.7066 W	Oct-12-06 11:30:47
165 29 45.3453 N	91 44.4415 W	Oct-12-06 11:26:26	205 29 44.8896 N	91 44.3091 W	Oct-12-06 11:30:56
166 29 41.5827 N	91 48.5365 W	Oct-12-06 11:26:29	206 29 41.5086 N	91 48.7075 W	Oct-12-06 11:30:59
167 29 50.1651 N	91 49.9085 W	Oct-12-06 11:26:29	207 29 44.8701 N	91 44.3099 W	Oct-12-06 11:31:08
168 29 45.3293 N	91 44.4272 W	Oct-12-06 11:26:38	208 29 41.5086 N	91 48.7078 W	Oct-12-06 11:31:08
169 29 50.1571 N	91 49.8946 W	Oct-12-06 11:26:41	209 29 44.8526 N	91 44.3111 W	Oct-12-06 11:31:17
170 29 45.3147 N	91 44.4143 W	Oct-12-06 11:26:47	210 29 41.5085 N	91 48.7081 W	Oct-12-06 11:31:17
171 29 41.5726 N	91 48.5557 W	Oct-12-06 11:26:47	211 29 44.8348 N	91 44.3126 W	Oct-12-06 11:31:29
172 29 41.5656 N	91 48.5663 W	Oct-12-06 11:26:59	212 29 44.8171 N	91 44.3133 W	Oct-12-06 11:31:38
173 29 50.1379 N	91 49.865 W	Oct-12-06 11:26:59	213 29 44.7995 N	91 44.3145 W	Oct-12-06 11:31:47
174 29 50.1272 N	91 49.8491 W	Oct-12-06 11:27:11	214 29 41.5081 N	91 48.7093 W	Oct-12-06 11:31:47
175 29 45.2726 N	91 44.3773 W	Oct-12-06 11:27:17	215 29 44.7838 N	91 44.3157 W	Oct-12-06 11:31:56
176 29 41.5569 N	91 48.5898 W	Oct-12-06 11:27:20	216 29 44.7469 N	91 44.3147 W	Oct-12-06 11:32:17
177 29 45.2567 N	91 44.3633 W	Oct-12-06 11:27:29	217 29 41.5084 N	91 48.7113 W	Oct-12-06 11:32:17
178 29 41.5507 N	91 48.5985 W	Oct-12-06 11:27:29	218 29 44.729 N	91 44.3147 W	Oct-12-06 11:32:29
179 29 50.1078 N	91 49.8225 W	Oct-12-06 11:27:29	219 29 44.711 N	91 44.3145 W	Oct-12-06 11:32:38
180 29 45.2421 N	91 44.352 W	Oct-12-06 11:27:38	220 29 44.6931 N	91 44.3145 W	Oct-12-06 11:32:47
181 29 41.5447 N	91 48.6086 W	Oct-12-06 11:27:38	221 29 44.6771 N	91 44.314 W	Oct-12-06 11:32:56
182 29 45.2263 N	91 44.3425 W	Oct-12-06 11:27:47	222 29 41.5152 N	91 48.7123 W	Oct-12-06 11:32:59
183 29 50.0864 N	91 49.7923 W	Oct-12-06 11:27:50	223 29 44.6594 N	91 44.3137 W	Oct-12-06 11:33:05
184 29 41.5348 N	91 48.6305 W	Oct-12-06 11:27:59	224 29 41.5188 N	91 48.7126 W	Oct-12-06 11:33:17
185 29 45.1939 N	91 44.3266 W	Oct-12-06 11:28:08	225 29 44.6223 N	91 44.3141 W	Oct-12-06 11:33:29
186 29 41.5315 N	91 48.6422 W	Oct-12-06 11:28:08	226 29 41.5198 N	91 48.713 W	Oct-12-06 11:33:29
187 29 45.1789 N	91 44.3207 W	Oct-12-06 11:28:17	227 29 44.6066 N	91 44.314 W	Oct-12-06 11:33:35
188 29 45.1602 N	91 44.3142 W	Oct-12-06 11:28:29	228 29 44.5874 N	91 44.3144 W	Oct-12-06 11:33:47
189 29 45.1431 N	91 44.3089 W	Oct-12-06 11:28:38	229 29 44.5702 N	91 44.3145 W	Oct-12-06 11:33:56
190 29 45.1255 N	91 44.3047 W	Oct-12-06 11:28:47	230 29 44.5545 N	91 44.314 W	Oct-12-06 11:34:05
191 29 41.526 N	91 48.6887 W	Oct-12-06 11:28:47	231 29 44.5181 N	91 44.3122 W	Oct-12-06 11:34:29
192 29 50.0186 N	91 49.7103 W	Oct-12-06 11:28:50	232 29 44.5027 N	91 44.3118 W	Oct-12-06 11:34:35
193 29 41.5225 N	91 48.6995 W	Oct-12-06 11:28:59	233 29 44.4842 N	91 44.3113 W	Oct-12-06 11:34:47
194 29 45.0893 N	91 44.2981 W	Oct-12-06 11:29:08	234 29 44.4674 N	91 44.3106 W	Oct-12-06 11:34:56
195 29 45.053 N	91 44.2949 W	Oct-12-06 11:29:29	235 29 44.4523 N	91 44.3102 W	Oct-12-06 11:35:05
196 29 41.5124 N	91 48.7081 W	Oct-12-06 11:29:29	236 29 41.5146 N	91 48.7086 W	Oct-12-06 11:35:08
197 29 49.9762 N	91 49.6658 W	Oct-12-06 11:29:29	237 29 44.4171 N	91 44.3087 W	Oct-12-06 11:35:29
198 29 41.5123 N	91 48.7074 W	Oct-12-06 11:29:38	238 29 44.4021 N	91 44.3078 W	Oct-12-06 11:35:38



## JOHN CHANCE LAND SURVEYS, INC.

239 29 44.3675 N	91 44.3047 W	Oct-12-06 11:35:56	279 29 50.0354 N	91 49.5594 W	Oct-12-06 11:41:20
240 29 41.5136 N	91 48.7032 W	Oct-12-06 11:35:59	280 29 43.9944 N	91 44.459 W	Oct-12-06 11:41:26
241 29 44.3528 N	91 44.3028 W	Oct-12-06 11:36:05	281 29 41.4961 N	91 48.6863 W	Oct-12-06 11:41:29
242 29 41.5132 N	91 48.7023 W	Oct-12-06 11:36:08	282 29 50.035 N	91 49.5597 W	Oct-12-06 11:41:29
243 29 49.982 N	91 49.6612 W	Oct-12-06 11:36:23	283 29 43.9873 N	91 44.4729 W	Oct-12-06 11:41:38
244 29 44.3193 N	91 44.2965 W	Oct-12-06 11:36:29	284 29 43.974 N	91 44.4966 W	Oct-12-06 11:41:56
245 29 44.3049 N	91 44.2937 W	Oct-12-06 11:36:35	285 29 50.0346 N	91 49.5614 W	Oct-12-06 11:41:59
246 29 49.9631 N	91 49.5162 W	Oct-12-06 11:36:41	286 29 43.9577 N	91 44.5228 W	Oct-12-06 11:42:17
247 29 44.2719 N	91 44.2863 W	Oct-12-06 11:36:56	287 29 43.9502 N	91 44.5346 W	Oct-12-06 11:42:26
248 29 41.5114 N	91 48.698 W	Oct-12-06 11:36:59	288 29 43.941 N	91 44.5483 W	Oct-12-06 11:42:38
249 29 49.9687 N	91 49.521 W	Oct-12-06 11:36:59	289 29 43.9332 N	91 44.5596 W	Oct-12-06 11:42:47
250 29 44.258 N	91 44.2832 W	Oct-12-06 11:37:05	290 29 43.9243 N	91 44.5721 W	Oct-12-06 11:42:56
251 29 44.2424 N	91 44.2797 W	Oct-12-06 11:37:17	291 29 43.9145 N	91 44.586 W	Oct-12-06 11:43:08
252 29 44.2256 N	91 44.2761 W	Oct-12-06 11:37:29	292 29 50.4206 N	91 50.3353 W	Oct-12-06 11:43:11
253 29 49.9794 N	91 49.531 W	Oct-12-06 11:37:32	293 29 50.0335 N	91 49.5593 W	Oct-12-06 11:43:11
254 29 44.2103 N	91 44.2729 W	Oct-12-06 11:37:38	294 29 43.9055 N	91 44.5984 W	Oct-12-06 11:43:17
255 29 41.5114 N	91 48.6973 W	Oct-12-06 11:37:38	295 29 50.0327 N	91 49.5595 W	Oct-12-06 11:43:20
256 29 41.5113 N	91 48.6971 W	Oct-12-06 11:37:50	296 29 43.8977 N	91 44.6096 W	Oct-12-06 11:43:26
257 29 44.1794 N	91 44.2687 W	Oct-12-06 11:37:56	297 29 41.4898 N	91 48.6188 W	Oct-12-06 11:43:29
258 29 44.1666 N	91 44.2651 W	Oct-12-06 11:38:05	298 29 43.8884 N	91 44.6237 W	Oct-12-06 11:43:38
259 29 41.5117 N	91 48.6968 W	Oct-12-06 11:38:08	299 29 41.4942 N	91 48.6116 W	Oct-12-06 11:43:38
260 29 41.5119 N	91 48.6969 W	Oct-12-06 11:38:20	300 29 43.8809 N	91 44.6353 W	Oct-12-06 11:43:47
261 29 44.1275 N	91 44.2689 W	Oct-12-06 11:38:38	301 29 43.8728 N	91 44.6487 W	Oct-12-06 11:43:56
262 29 41.512 N	91 48.6974 W	Oct-12-06 11:38:38	302 29 43.8641 N	91 44.6635 W	Oct-12-06 11:44:08
263 29 41.5123 N	91 48.6973 W	Oct-12-06 11:38:47	303 29 43.8562 N	91 44.6772 W	Oct-12-06 11:44:17
264 29 44.1058 N	91 44.2834 W	Oct-12-06 11:38:56	304 29 41.5047 N	91 48.5912 W	Oct-12-06 11:44:20
265 29 50.0132 N	91 49.5663 W	Oct-12-06 11:38:59	305 29 43.8491 N	91 44.6898 W	Oct-12-06 11:44:26
266 29 50.1723 N	91 49.9012 W	Oct-12-06 11:39:02	306 29 41.5051 N	91 48.5858 W	Oct-12-06 11:44:29
267 29 44.0783 N	91 44.3162 W	Oct-12-06 11:39:26	307 29 43.8403 N	91 44.7052 W	Oct-12-06 11:44:38
268 29 50.0223 N	91 49.571 W	Oct-12-06 11:39:32	308 29 41.5036 N	91 48.5794 W	Oct-12-06 11:44:41
269 29 44.0689 N	91 44.3288 W	Oct-12-06 11:39:38	309 29 41.5015 N	91 48.5745 W	Oct-12-06 11:44:47
270 29 44.0375 N	91 44.3725 W	Oct-12-06 11:40:17	310 29 50.0336 N	91 49.558 W	Oct-12-06 11:44:50
271 29 44.0304 N	91 44.3838 W	Oct-12-06 11:40:26	311 29 43.825 N	91 44.7315 W	Oct-12-06 11:44:56
272 29 41.5184 N	91 48.6972 W	Oct-12-06 11:40:29	312 29 50.0341 N	91 49.5584 W	Oct-12-06 11:44:59
273 29 50.0323 N	91 49.5634 W	Oct-12-06 11:40:29	313 29 50.5386 N	91 50.5262 W	Oct-12-06 11:45:02
274 29 44.0233 N	91 44.3967 W	Oct-12-06 11:40:38	314 29 43.8165 N	91 44.7467 W	Oct-12-06 11:45:08
275 29 41.5182 N	91 48.6981 W	Oct-12-06 11:40:38	315 29 41.4938 N	91 48.5669 W	Oct-12-06 11:45:08
276 29 41.5165 N	91 48.6985 W	Oct-12-06 11:40:50	316 29 41.4913 N	91 48.5647 W	Oct-12-06 11:45:20
277 29 44.0112 N	91 44.4206 W	Oct-12-06 11:40:56	317 29 43.802 N	91 44.7737 W	Oct-12-06 11:45:26
278 29 41.502 N	91 48.6896 W	Oct-12-06 11:41:20	318 29 41.49 N	91 48.5625 W	Oct-12-06 11:45:29



## JOHN CHANCE LAND SURVEYS, INC.

319 29 43.7935 N	91 44.7892 W	Oct-12-06 11:45:38	359 29 43.5926 N	91 45.2593 W	Oct-12-06 11:50:59
320 29 41.4883 N	91 48.5604 W	Oct-12-06 11:45:41	360 29 43.5842 N	91 45.2886 W	Oct-12-06 11:51:17
321 29 43.7789 N	91 44.8159 W	Oct-12-06 11:45:56	361 29 43.5796 N	91 45.3036 W	Oct-12-06 11:51:26
322 29 50.6026 N	91 50.6357 W	Oct-12-06 11:46:02	362 29 41.5034 N	91 48.5578 W	Oct-12-06 11:51:29
323 29 41.485 N	91 48.5595 W	Oct-12-06 11:46:08	363 29 43.575 N	91 45.3189 W	Oct-12-06 11:51:38
324 29 50.6132 N	91 50.6557 W	Oct-12-06 11:46:11	364 29 43.5706 N	91 45.3341 W	Oct-12-06 11:51:47
325 29 41.4851 N	91 48.5589 W	Oct-12-06 11:46:29	365 29 43.5659 N	91 45.3512 W	Oct-12-06 11:51:59
326 29 50.0375 N	91 49.5543 W	Oct-12-06 11:46:29	366 29 41.5273 N	91 48.5558 W	Oct-12-06 11:52:08
327 29 43.7484 N	91 44.8738 W	Oct-12-06 11:46:38	367 29 43.5557 N	91 45.3966 W	Oct-12-06 11:52:26
328 29 41.4857 N	91 48.5588 W	Oct-12-06 11:46:41	368 29 43.5532 N	91 45.412 W	Oct-12-06 11:52:35
329 29 43.7285 N	91 44.9173 W	Oct-12-06 11:47:08	369 29 41.5451 N	91 48.5449 W	Oct-12-06 11:52:41
330 29 41.4842 N	91 48.5589 W	Oct-12-06 11:47:29	370 29 43.5502 N	91 45.4281 W	Oct-12-06 11:52:47
331 29 43.7112 N	91 44.9618 W	Oct-12-06 11:47:38	371 29 43.5474 N	91 45.4457 W	Oct-12-06 11:52:59
332 29 41.4842 N	91 48.5599 W	Oct-12-06 11:47:41	372 29 43.5429 N	91 45.4764 W	Oct-12-06 11:53:17
333 29 50.68 N	91 50.8239 W	Oct-12-06 11:47:41	373 29 43.5394 N	91 45.4918 W	Oct-12-06 11:53:26
334 29 43.6934 N	91 45.005 W	Oct-12-06 11:48:05	374 29 43.5352 N	91 45.507 W	Oct-12-06 11:53:35
335 29 41.4838 N	91 48.5649 W	Oct-12-06 11:48:20	375 29 41.5737 N	91 48.5021 W	Oct-12-06 11:53:41
336 29 41.483 N	91 48.5654 W	Oct-12-06 11:48:29	376 29 43.5303 N	91 45.522 W	Oct-12-06 11:53:47
337 29 43.6731 N	91 45.049 W	Oct-12-06 11:48:38	377 29 50.0331 N	91 49.5659 W	Oct-12-06 11:53:50
338 29 41.4823 N	91 48.5656 W	Oct-12-06 11:48:41	378 29 43.5248 N	91 45.5382 W	Oct-12-06 11:53:59
339 29 50.702 N	91 50.9446 W	Oct-12-06 11:48:41	379 29 41.5854 N	91 48.4867 W	Oct-12-06 11:53:59
340 29 43.6664 N	91 45.0632 W	Oct-12-06 11:48:47	380 29 43.5148 N	91 45.5663 W	Oct-12-06 11:54:17
341 29 41.4809 N	91 48.568 W	Oct-12-06 11:48:59	381 29 43.5088 N	91 45.5808 W	Oct-12-06 11:54:26
342 29 43.6528 N	91 45.0915 W	Oct-12-06 11:49:05	382 29 41.6022 N	91 48.4557 W	Oct-12-06 11:54:29
343 29 43.6458 N	91 45.1076 W	Oct-12-06 11:49:17	383 29 43.5027 N	91 45.595 W	Oct-12-06 11:54:35
344 29 41.4811 N	91 48.5682 W	Oct-12-06 11:49:20	384 29 41.6101 N	91 48.4457 W	Oct-12-06 11:54:41
345 29 41.481 N	91 48.568 W	Oct-12-06 11:49:29	385 29 43.4893 N	91 45.6228 W	Oct-12-06 11:54:56
346 29 43.6344 N	91 45.1354 W	Oct-12-06 11:49:38	386 29 43.481 N	91 45.6378 W	Oct-12-06 11:55:08
347 29 41.4811 N	91 48.5679 W	Oct-12-06 11:49:41	387 29 41.6257 N	91 48.4121 W	Oct-12-06 11:55:08
348 29 41.4807 N	91 48.5682 W	Oct-12-06 11:49:47	388 29 43.4733 N	91 45.6514 W	Oct-12-06 11:55:17
349 29 43.6224 N	91 45.1671 W	Oct-12-06 11:49:59	389 29 50.0263 N	91 49.5797 W	Oct-12-06 11:55:20
350 29 41.4805 N	91 48.5679 W	Oct-12-06 11:49:59	390 29 43.4667 N	91 45.664 W	Oct-12-06 11:55:26
351 29 50.717 N	91 51.1071 W	Oct-12-06 11:50:02	391 29 41.6355 N	91 48.3905 W	Oct-12-06 11:55:29
352 29 43.6122 N	91 45.1962 W	Oct-12-06 11:50:17	392 29 43.4595 N	91 45.6784 W	Oct-12-06 11:55:35
353 29 41.4808 N	91 48.5702 W	Oct-12-06 11:50:20	393 29 50.0272 N	91 49.5813 W	Oct-12-06 11:55:50
354 29 41.4827 N	91 48.5719 W	Oct-12-06 11:50:29	394 29 43.4454 N	91 45.7072 W	Oct-12-06 11:55:56
355 29 43.6025 N	91 45.2272 W	Oct-12-06 11:50:38	395 29 41.6533 N	91 48.3421 W	Oct-12-06 11:56:08
356 29 41.4831 N	91 48.5715 W	Oct-12-06 11:50:41	396 29 43.4318 N	91 45.7381 W	Oct-12-06 11:56:17
357 29 43.5978 N	91 45.2425 W	Oct-12-06 11:50:47	397 29 50.029 N	91 49.5826 W	Oct-12-06 11:56:20
358 29 41.4834 N	91 48.5714 W	Oct-12-06 11:50:47	398 29 43.4258 N	91 45.7513 W	Oct-12-06 11:56:26



## JOHN CHANCE LAND SURVEYS, INC.

399 29 43.4184 N	91 45.7671 W	Oct-12-06 11:56:38	439 29 50.0283 N	91 49.5809 W	Oct-12-06 12:02:20
400 29 43.3923 N	91 45.8243 W	Oct-12-06 11:57:17	440 29 43.1086 N	91 46.2459 W	Oct-12-06 12:02:47
401 29 41.6363 N	91 48.3396 W	Oct-12-06 11:57:17	441 29 41.3787 N	91 48.5685 W	Oct-12-06 12:02:50
402 29 43.3853 N	91 45.8379 W	Oct-12-06 11:57:29	442 29 43.0798 N	91 46.2822 W	Oct-12-06 12:03:17
403 29 41.6304 N	91 48.3523 W	Oct-12-06 11:57:29	443 29 41.3534 N	91 48.583 W	Oct-12-06 12:03:17
404 29 41.6193 N	91 48.372 W	Oct-12-06 11:57:50	444 29 43.0706 N	91 46.2944 W	Oct-12-06 12:03:26
405 29 43.3637 N	91 45.8776 W	Oct-12-06 11:57:56	445 29 50.7059 N	91 52.7295 W	Oct-12-06 12:03:29
406 29 50.0288 N	91 49.5812 W	Oct-12-06 11:57:59	446 29 50.0294 N	91 49.5801 W	Oct-12-06 12:03:29
407 29 41.6047 N	91 48.3881 W	Oct-12-06 11:58:08	447 29 43.0606 N	91 46.3082 W	Oct-12-06 12:03:38
408 29 43.3465 N	91 45.9053 W	Oct-12-06 11:58:17	448 29 43.0524 N	91 46.3195 W	Oct-12-06 12:03:47
409 29 41.5983 N	91 48.395 W	Oct-12-06 11:58:17	449 29 41.3126 N	91 48.6011 W	Oct-12-06 12:03:59
410 29 43.3386 N	91 45.9187 W	Oct-12-06 11:58:29	450 29 43.0336 N	91 46.346 W	Oct-12-06 12:04:08
411 29 43.3304 N	91 45.9319 W	Oct-12-06 11:58:38	451 29 43.0256 N	91 46.3575 W	Oct-12-06 12:04:17
412 29 43.3229 N	91 45.9437 W	Oct-12-06 11:58:47	452 29 43.0169 N	91 46.3702 W	Oct-12-06 12:04:26
413 29 43.3144 N	91 45.9563 W	Oct-12-06 11:58:56	453 29 43.0081 N	91 46.3831 W	Oct-12-06 12:04:38
414 29 43.2955 N	91 45.9831 W	Oct-12-06 11:59:17	454 29 42.9993 N	91 46.3962 W	Oct-12-06 12:04:47
415 29 41.5531 N	91 48.4366 W	Oct-12-06 11:59:20	455 29 41.2504 N	91 48.6225 W	Oct-12-06 12:04:59
416 29 43.2862 N	91 45.9954 W	Oct-12-06 11:59:29	456 29 42.9724 N	91 46.4341 W	Oct-12-06 12:05:17
417 29 43.268 N	91 46.0183 W	Oct-12-06 11:59:47	457 29 41.2305 N	91 48.6291 W	Oct-12-06 12:05:17
418 29 43.2567 N	91 46.0311 W	Oct-12-06 11:59:59	458 29 42.9631 N	91 46.4468 W	Oct-12-06 12:05:26
419 29 41.5228 N	91 48.464 W	Oct-12-06 11:59:59	459 29 42.9539 N	91 46.4592 W	Oct-12-06 12:05:35
420 29 43.247 N	91 46.0426 W	Oct-12-06 12:00:08	460 29 42.944 N	91 46.4727 W	Oct-12-06 12:05:47
421 29 41.5135 N	91 48.4721 W	Oct-12-06 12:00:08	461 29 42.9256 N	91 46.4979 W	Oct-12-06 12:06:08
422 29 50.0285 N	91 49.5818 W	Oct-12-06 12:00:11	462 29 41.172 N	91 48.6383 W	Oct-12-06 12:06:11
423 29 43.2386 N	91 46.0554 W	Oct-12-06 12:00:17	463 29 42.9175 N	91 46.509 W	Oct-12-06 12:06:17
424 29 43.2302 N	91 46.0685 W	Oct-12-06 12:00:29	464 29 42.8801 N	91 46.5587 W	Oct-12-06 12:06:56
425 29 41.4972 N	91 48.4857 W	Oct-12-06 12:00:29	465 29 50.029 N	91 49.5814 W	Oct-12-06 12:06:59
426 29 43.2225 N	91 46.082 W	Oct-12-06 12:00:38	466 29 42.8698 N	91 46.5722 W	Oct-12-06 12:07:08
427 29 43.2151 N	91 46.0935 W	Oct-12-06 12:00:47	467 29 41.1078 N	91 48.6391 W	Oct-12-06 12:07:11
428 29 41.4805 N	91 48.5004 W	Oct-12-06 12:00:50	468 29 42.8613 N	91 46.5835 W	Oct-12-06 12:07:17
429 29 41.4641 N	91 48.5148 W	Oct-12-06 12:01:08	469 29 41.087 N	91 48.641 W	Oct-12-06 12:07:29
430 29 43.1899 N	91 46.1312 W	Oct-12-06 12:01:17	470 29 50.7096 N	91 53.2119 W	Oct-12-06 12:07:32
431 29 50.029 N	91 49.5816 W	Oct-12-06 12:01:20	471 29 42.8428 N	91 46.6084 W	Oct-12-06 12:07:35
432 29 43.1715 N	91 46.1581 W	Oct-12-06 12:01:38	472 29 42.8327 N	91 46.6221 W	Oct-12-06 12:07:47
433 29 41.441 N	91 48.5334 W	Oct-12-06 12:01:38	473 29 41.0669 N	91 48.6419 W	Oct-12-06 12:07:50
434 29 43.1632 N	91 46.1698 W	Oct-12-06 12:01:47	474 29 42.8242 N	91 46.6334 W	Oct-12-06 12:07:56
435 29 41.4322 N	91 48.5408 W	Oct-12-06 12:01:50	475 29 42.8136 N	91 46.6471 W	Oct-12-06 12:08:08
436 29 41.4154 N	91 48.5519 W	Oct-12-06 12:02:08	476 29 41.0485 N	91 48.6429 W	Oct-12-06 12:08:11
437 29 43.1354 N	91 46.2074 W	Oct-12-06 12:02:17	477 29 42.786 N	91 46.6821 W	Oct-12-06 12:08:38
438 29 41.4083 N	91 48.5554 W	Oct-12-06 12:02:17	478 29 41.0113 N	91 48.6423 W	Oct-12-06 12:08:50



## JOHN CHANCE LAND SURVEYS, INC.

479 29 50.0288 N	91 49.5825 W	Oct-12-06 12:08:59	519 29 42.4682 N	91 47.1373 W	Oct-12-06 12:14:38
480 29 40.9975 N	91 48.6467 W	Oct-12-06 12:09:08	520 29 42.4602 N	91 47.1491 W	Oct-12-06 12:14:47
481 29 40.9914 N	91 48.6493 W	Oct-12-06 12:09:20	521 29 42.4503 N	91 47.1629 W	Oct-12-06 12:14:59
482 29 42.7311 N	91 46.7547 W	Oct-12-06 12:09:35	522 29 40.9253 N	91 48.6403 W	Oct-12-06 12:14:59
483 29 42.7212 N	91 46.7685 W	Oct-12-06 12:09:47	523 29 42.4415 N	91 47.1762 W	Oct-12-06 12:15:08
484 29 40.9871 N	91 48.6545 W	Oct-12-06 12:09:50	524 29 40.9191 N	91 48.638 W	Oct-12-06 12:15:08
485 29 42.7033 N	91 46.7933 W	Oct-12-06 12:10:08	525 29 42.4328 N	91 47.1889 W	Oct-12-06 12:15:17
486 29 42.6943 N	91 46.8062 W	Oct-12-06 12:10:17	526 29 42.4167 N	91 47.2156 W	Oct-12-06 12:15:38
487 29 40.9828 N	91 48.6618 W	Oct-12-06 12:10:20	527 29 42.3997 N	91 47.2414 W	Oct-12-06 12:15:59
488 29 40.9783 N	91 48.6664 W	Oct-12-06 12:10:29	528 29 50.0281 N	91 49.5818 W	Oct-12-06 12:15:59
489 29 42.6773 N	91 46.8301 W	Oct-12-06 12:10:38	529 29 42.3912 N	91 47.2544 W	Oct-12-06 12:16:08
490 29 40.9752 N	91 48.6688 W	Oct-12-06 12:10:38	530 29 40.8996 N	91 48.6297 W	Oct-12-06 12:16:08
491 29 42.6674 N	91 46.8441 W	Oct-12-06 12:10:47	531 29 42.3826 N	91 47.2676 W	Oct-12-06 12:16:17
492 29 40.9732 N	91 48.6701 W	Oct-12-06 12:10:50	532 29 40.8964 N	91 48.623 W	Oct-12-06 12:16:17
493 29 42.6592 N	91 46.8554 W	Oct-12-06 12:10:56	533 29 42.3651 N	91 47.2919 W	Oct-12-06 12:16:38
494 29 40.9708 N	91 48.6716 W	Oct-12-06 12:10:59	534 29 42.3564 N	91 47.3048 W	Oct-12-06 12:16:47
495 29 50.029 N	91 49.5829 W	Oct-12-06 12:10:59	535 29 40.9152 N	91 48.6137 W	Oct-12-06 12:16:50
496 29 42.6493 N	91 46.8692 W	Oct-12-06 12:11:08	536 29 40.9291 N	91 48.621 W	Oct-12-06 12:17:08
497 29 40.9578 N	91 48.6642 W	Oct-12-06 12:11:20	537 29 42.3277 N	91 47.3382 W	Oct-12-06 12:17:17
498 29 42.6229 N	91 46.9055 W	Oct-12-06 12:11:35	538 29 50.0279 N	91 49.5823 W	Oct-12-06 12:17:20
499 29 42.6131 N	91 46.9196 W	Oct-12-06 12:11:47	539 29 50.0282 N	91 49.5823 W	Oct-12-06 12:17:29
500 29 40.9478 N	91 48.6525 W	Oct-12-06 12:11:50	540 29 42.3108 N	91 47.3538 W	Oct-12-06 12:17:38
501 29 42.595 N	91 46.9443 W	Oct-12-06 12:12:08	541 29 40.9502 N	91 48.6389 W	Oct-12-06 12:17:50
502 29 40.9384 N	91 48.643 W	Oct-12-06 12:12:08	542 29 50.0281 N	91 49.5821 W	Oct-12-06 12:17:59
503 29 50.0291 N	91 49.5819 W	Oct-12-06 12:12:11	543 29 42.2831 N	91 47.3784 W	Oct-12-06 12:18:17
504 29 42.5788 N	91 46.9721 W	Oct-12-06 12:12:26	544 29 40.957 N	91 48.6591 W	Oct-12-06 12:18:17
505 29 42.5711 N	91 46.9858 W	Oct-12-06 12:12:38	545 29 42.2736 N	91 47.3866 W	Oct-12-06 12:18:38
506 29 40.9326 N	91 48.6384 W	Oct-12-06 12:12:50	546 29 40.9604 N	91 48.6748 W	Oct-12-06 12:18:41
507 29 42.5585 N	91 47.0126 W	Oct-12-06 12:12:56	547 29 40.9609 N	91 48.68 W	Oct-12-06 12:18:47
508 29 40.9324 N	91 48.6386 W	Oct-12-06 12:12:59	548 29 50.029 N	91 49.583 W	Oct-12-06 12:18:50
509 29 42.5503 N	91 47.027 W	Oct-12-06 12:13:08	549 29 42.2623 N	91 47.3966 W	Oct-12-06 12:19:38
510 29 42.5415 N	91 47.0395 W	Oct-12-06 12:13:17	550 29 42.2622 N	91 47.3972 W	Oct-12-06 12:19:47
511 29 50.0285 N	91 49.5817 W	Oct-12-06 12:13:20	551 29 40.9628 N	91 48.7054 W	Oct-12-06 12:19:47
512 29 42.532 N	91 47.0508 W	Oct-12-06 12:13:26	552 29 50.0294 N	91 49.5811 W	Oct-12-06 12:19:59
513 29 42.5224 N	91 47.0622 W	Oct-12-06 12:13:38	553 29 42.2627 N	91 47.3993 W	Oct-12-06 12:20:05
514 29 40.9339 N	91 48.6405 W	Oct-12-06 12:13:50	554 29 40.9628 N	91 48.7105 W	Oct-12-06 12:20:08
515 29 40.9352 N	91 48.6411 W	Oct-12-06 12:13:59	555 29 40.9628 N	91 48.7123 W	Oct-12-06 12:20:20
516 29 42.4947 N	91 47.0986 W	Oct-12-06 12:14:08	556 29 40.9614 N	91 48.7166 W	Oct-12-06 12:20:47
517 29 42.4857 N	91 47.1111 W	Oct-12-06 12:14:17	557 29 42.2658 N	91 47.413 W	Oct-12-06 12:21:08
518 29 42.4771 N	91 47.1242 W	Oct-12-06 12:14:26	558 29 40.9601 N	91 48.7174 W	Oct-12-06 12:21:11

# JOHN CHANCE LAND SURVEYS, INC.



559 29 42.2661 N	91 47.4148 W	Oct-12-06 12:21:17	599 29 40.9567 N	91 48.6106 W	Oct-12-06 12:29:47
560 29 42.2659 N	91 47.4162 W	Oct-12-06 12:21:38	600 29 42.7003 N	91 47.9567 W	Oct-12-06 12:30:17
561 29 42.2665 N	91 47.416 W	Oct-12-06 12:21:59	601 29 42.7095 N	91 47.9718 W	Oct-12-06 12:30:26
562 29 42.2669 N	91 47.4158 W	Oct-12-06 12:22:05	602 29 42.7181 N	91 47.9853 W	Oct-12-06 12:30:38
563 29 40.9591 N	91 48.7179 W	Oct-12-06 12:22:11	603 29 42.7281 N	91 47.9999 W	Oct-12-06 12:30:47
564 29 42.2669 N	91 47.4161 W	Oct-12-06 12:22:17	604 29 40.9613 N	91 48.6131 W	Oct-12-06 12:30:47
565 29 40.9571 N	91 48.7184 W	Oct-12-06 12:22:47	605 29 42.7484 N	91 48.0289 W	Oct-12-06 12:31:08
566 29 50.0356 N	91 49.5813 W	Oct-12-06 12:22:50	606 29 42.7589 N	91 48.0454 W	Oct-12-06 12:31:17
567 29 42.2722 N	91 47.4199 W	Oct-12-06 12:23:05	607 29 40.9505 N	91 48.6145 W	Oct-12-06 12:31:20
568 29 42.2683 N	91 47.4274 W	Oct-12-06 12:23:17	608 29 42.7684 N	91 48.0604 W	Oct-12-06 12:31:26
569 29 50.0437 N	91 49.5738 W	Oct-12-06 12:23:29	609 29 42.7767 N	91 48.0742 W	Oct-12-06 12:31:38
570 29 50.0378 N	91 49.5704 W	Oct-12-06 12:23:41	610 29 42.8025 N	91 48.1209 W	Oct-12-06 12:32:08
571 29 50.0308 N	91 49.5645 W	Oct-12-06 12:23:50	611 29 42.8109 N	91 48.1385 W	Oct-12-06 12:32:17
572 29 42.304 N	91 47.477 W	Oct-12-06 12:24:05	612 29 42.8176 N	91 48.1552 W	Oct-12-06 12:32:26
573 29 40.9467 N	91 48.6903 W	Oct-12-06 12:24:11	613 29 40.9442 N	91 48.6157 W	Oct-12-06 12:32:29
574 29 50.0127 N	91 49.5495 W	Oct-12-06 12:24:11	614 29 42.8235 N	91 48.1702 W	Oct-12-06 12:32:38
575 29 42.3146 N	91 47.4848 W	Oct-12-06 12:24:17	615 29 42.8413 N	91 48.2209 W	Oct-12-06 12:33:08
576 29 40.9502 N	91 48.6713 W	Oct-12-06 12:25:11	616 29 42.8448 N	91 48.2409 W	Oct-12-06 12:33:17
577 29 40.9504 N	91 48.6687 W	Oct-12-06 12:25:20	617 29 42.8464 N	91 48.2589 W	Oct-12-06 12:33:26
578 29 50.0044 N	91 49.5531 W	Oct-12-06 12:25:50	618 29 50.0042 N	91 49.5537 W	Oct-12-06 12:33:41
579 29 42.4472 N	91 47.6027 W	Oct-12-06 12:26:08	619 29 50.0048 N	91 49.5544 W	Oct-12-06 12:33:50
580 29 40.9513 N	91 48.66 W	Oct-12-06 12:26:11	620 29 40.9292 N	91 48.6249 W	Oct-12-06 12:33:59
581 29 42.4594 N	91 47.6171 W	Oct-12-06 12:26:17	621 29 40.9272 N	91 48.6263 W	Oct-12-06 12:34:08
582 29 40.952 N	91 48.6587 W	Oct-12-06 12:26:20	622 29 50.0074 N	91 49.5558 W	Oct-12-06 12:34:11
583 29 42.481 N	91 47.6423 W	Oct-12-06 12:26:38	623 29 42.8427 N	91 48.3512 W	Oct-12-06 12:34:17
584 29 42.4913 N	91 47.6563 W	Oct-12-06 12:26:47	624 29 40.9241 N	91 48.6277 W	Oct-12-06 12:34:29
585 29 50.0043 N	91 49.5528 W	Oct-12-06 12:26:50	625 29 50.0108 N	91 49.559 W	Oct-12-06 12:34:29
586 29 42.5113 N	91 47.6838 W	Oct-12-06 12:27:08	626 29 50.0127 N	91 49.5604 W	Oct-12-06 12:34:41
587 29 40.9568 N	91 48.6527 W	Oct-12-06 12:27:11	627 29 42.8363 N	91 48.4065 W	Oct-12-06 12:34:47
588 29 42.5232 N	91 47.6978 W	Oct-12-06 12:27:17	628 29 50.0141 N	91 49.561 W	Oct-12-06 12:34:50
589 29 42.5436 N	91 47.7228 W	Oct-12-06 12:27:38	629 29 40.9223 N	91 48.6276 W	Oct-12-06 12:34:59
590 29 40.9616 N	91 48.6507 W	Oct-12-06 12:27:59	630 29 50.0159 N	91 49.5628 W	Oct-12-06 12:34:59
591 29 42.5747 N	91 47.7645 W	Oct-12-06 12:28:08	631 29 40.9218 N	91 48.6273 W	Oct-12-06 12:35:08
592 29 40.9628 N	91 48.6501 W	Oct-12-06 12:28:11	632 29 50.018 N	91 49.5645 W	Oct-12-06 12:35:11
593 29 40.9637 N	91 48.6496 W	Oct-12-06 12:28:20	633 29 42.8209 N	91 48.46 W	Oct-12-06 12:35:17
594 29 40.9684 N	91 48.6328 W	Oct-12-06 12:28:59	634 29 40.9219 N	91 48.627 W	Oct-12-06 12:35:29
595 29 42.6343 N	91 47.8503 W	Oct-12-06 12:29:05	635 29 50.0216 N	91 49.5669 W	Oct-12-06 12:35:29
596 29 42.6448 N	91 47.8667 W	Oct-12-06 12:29:17	636 29 40.9219 N	91 48.6271 W	Oct-12-06 12:35:41
597 29 40.9628 N	91 48.6186 W	Oct-12-06 12:29:20	637 29 50.0244 N	91 49.5697 W	Oct-12-06 12:35:50
598 29 40.9604 N	91 48.6155 W	Oct-12-06 12:29:29	638 29 40.9187 N	91 48.631 W	Oct-12-06 12:35:59



## JOHN CHANCE LAND SURVEYS, INC.

639 29 42.754 N	91 48.5052 W	Oct-12-06 12:36:08	679 29 42.1292 N	91 48.6167 W	Oct-12-06 12:42:38
640 29 40.9165 N	91 48.6329 W	Oct-12-06 12:36:08	680 29 42.1134 N	91 48.6193 W	Oct-12-06 12:42:47
641 29 42.7373 N	91 48.5095 W	Oct-12-06 12:36:17	681 29 40.926 N	91 48.645 W	Oct-12-06 12:42:47
642 29 42.7057 N	91 48.5162 W	Oct-12-06 12:36:38	682 29 42.0816 N	91 48.6246 W	Oct-12-06 12:43:08
643 29 40.9136 N	91 48.6354 W	Oct-12-06 12:36:41	683 29 40.9275 N	91 48.6476 W	Oct-12-06 12:43:11
644 29 40.9132 N	91 48.6358 W	Oct-12-06 12:36:50	684 29 42.0345 N	91 48.6319 W	Oct-12-06 12:43:38
645 29 40.913 N	91 48.6361 W	Oct-12-06 12:36:59	685 29 42.0028 N	91 48.6364 W	Oct-12-06 12:43:59
646 29 42.6585 N	91 48.5245 W	Oct-12-06 12:37:08	686 29 41.9871 N	91 48.6388 W	Oct-12-06 12:44:08
647 29 40.9126 N	91 48.6368 W	Oct-12-06 12:37:08	687 29 40.9304 N	91 48.65 W	Oct-12-06 12:44:11
648 29 42.6406 N	91 48.5268 W	Oct-12-06 12:37:17	688 29 41.9556 N	91 48.6441 W	Oct-12-06 12:44:29
649 29 40.9121 N	91 48.6373 W	Oct-12-06 12:37:20	689 29 40.9321 N	91 48.6523 W	Oct-12-06 12:44:47
650 29 42.608 N	91 48.5306 W	Oct-12-06 12:37:38	690 29 50.0256 N	91 49.5729 W	Oct-12-06 12:44:50
651 29 40.9099 N	91 48.6399 W	Oct-12-06 12:37:41	691 29 41.908 N	91 48.6505 W	Oct-12-06 12:44:59
652 29 40.9096 N	91 48.64 W	Oct-12-06 12:37:50	692 29 41.8924 N	91 48.6526 W	Oct-12-06 12:45:08
653 29 42.561 N	91 48.5386 W	Oct-12-06 12:38:08	693 29 41.8617 N	91 48.6559 W	Oct-12-06 12:45:29
654 29 40.9098 N	91 48.6389 W	Oct-12-06 12:38:08	694 29 40.9342 N	91 48.6539 W	Oct-12-06 12:45:29
655 29 42.5432 N	91 48.5417 W	Oct-12-06 12:38:17	695 29 40.9341 N	91 48.6554 W	Oct-12-06 12:45:41
656 29 40.9113 N	91 48.6381 W	Oct-12-06 12:38:47	696 29 40.9314 N	91 48.6594 W	Oct-12-06 12:45:47
657 29 42.4783 N	91 48.5525 W	Oct-12-06 12:38:59	697 29 41.8181 N	91 48.6628 W	Oct-12-06 12:45:59
658 29 50.0297 N	91 49.581 W	Oct-12-06 12:38:59	698 29 40.9227 N	91 48.6695 W	Oct-12-06 12:46:11
659 29 50.0298 N	91 49.5798 W	Oct-12-06 12:39:08	699 29 41.7902 N	91 48.6675 W	Oct-12-06 12:46:17
660 29 42.4465 N	91 48.557 W	Oct-12-06 12:39:17	700 29 41.774 N	91 48.6689 W	Oct-12-06 12:46:26
661 29 42.3986 N	91 48.5654 W	Oct-12-06 12:39:47	701 29 40.9132 N	91 48.681 W	Oct-12-06 12:46:29
662 29 42.3823 N	91 48.569 W	Oct-12-06 12:39:59	702 29 40.9089 N	91 48.688 W	Oct-12-06 12:46:41
663 29 42.3677 N	91 48.5723 W	Oct-12-06 12:40:08	703 29 40.9066 N	91 48.6939 W	Oct-12-06 12:46:50
664 29 50.0342 N	91 49.5771 W	Oct-12-06 12:40:08	704 29 41.7153 N	91 48.6719 W	Oct-12-06 12:47:05
665 29 42.3498 N	91 48.576 W	Oct-12-06 12:40:17	705 29 40.9064 N	91 48.6996 W	Oct-12-06 12:47:11
666 29 42.3339 N	91 48.5791 W	Oct-12-06 12:40:26	706 29 41.6997 N	91 48.6731 W	Oct-12-06 12:47:17
667 29 42.3179 N	91 48.5822 W	Oct-12-06 12:40:38	707 29 40.9078 N	91 48.6998 W	Oct-12-06 12:47:29
668 29 40.9171 N	91 48.6429 W	Oct-12-06 12:40:41	708 29 40.9083 N	91 48.6991 W	Oct-12-06 12:47:41
669 29 42.3021 N	91 48.5853 W	Oct-12-06 12:40:47	709 29 40.9094 N	91 48.6992 W	Oct-12-06 12:47:50
670 29 42.2863 N	91 48.5886 W	Oct-12-06 12:40:59	710 29 41.6227 N	91 48.6763 W	Oct-12-06 12:48:05
671 29 40.9185 N	91 48.6434 W	Oct-12-06 12:41:08	711 29 40.9118 N	91 48.6987 W	Oct-12-06 12:48:11
672 29 42.2392 N	91 48.598 W	Oct-12-06 12:41:26	712 29 41.6077 N	91 48.6763 W	Oct-12-06 12:48:17
673 29 42.2234 N	91 48.6004 W	Oct-12-06 12:41:38	713 29 41.591 N	91 48.6767 W	Oct-12-06 12:48:29
674 29 42.2075 N	91 48.6029 W	Oct-12-06 12:41:47	714 29 40.9159 N	91 48.6968 W	Oct-12-06 12:48:29
675 29 42.1918 N	91 48.6057 W	Oct-12-06 12:41:59	715 29 50.0439 N	91 49.5936 W	Oct-12-06 12:48:29
676 29 40.9226 N	91 48.6447 W	Oct-12-06 12:41:59	716 29 40.9171 N	91 48.6954 W	Oct-12-06 12:48:38
677 29 42.1762 N	91 48.6086 W	Oct-12-06 12:42:08	717 29 41.5455 N	91 48.6772 W	Oct-12-06 12:48:59
678 29 40.9233 N	91 48.6449 W	Oct-12-06 12:42:08	718 29 40.9203 N	91 48.6922 W	Oct-12-06 12:49:11



719 29 41.5157 N	91 48.6771 W	Oct-12-06 12:49:17	722 29 40.9186 N	91 48.6896 W	Oct-12-06 12:49:38
720 29 41.4992 N	91 48.6815 W	Oct-12-06 12:49:26	723 29 50.0436 N	91 49.5919 W	Oct-12-06 12:50:08
721 29 40.9227 N	91 48.6888 W	Oct-12-06 12:49:29			



## **APPENDIX C – E-MAIL CORRESPONDANCES**

Sent via BlackBerry from Cingular Wireless

-----Original Message-----

From: Turrell Morgan <morgan.turrell@ntsb.gov>  
Date: Thu, 02 Nov 2006 09:58:32  
To: athena\_dlee@atvci.net, bniemeyer@chevron.com, bosborn@gulfportenergy.com, Curtis Brian <brian.curtis@ntsb.gov, danaa@dnr.state.la.us, Dyck Rod <DYCKR@ntsb.gov, gary@centralboat.com, hschwartz@gulfportenergy.com, jeffrey.w.johnson@uscg.mil, "John LT Luff (E-mail)" <John.R.Luff@uscg.mil, Koval Charles <KOVALC@ntsb.gov, LaRue Liam <liam.larue@ntsb.gov, marcotte@chevron.com, mark.champagne@la.gov, mike@centralboat.com, terry.d.gilbreath@uscg.mil, Tim.Osborn@noaa.gov, Turrell Morgan <morgan.turrell@ntsb.gov  
Subject: FW: [Fwd: Re: Miss Megan - 12OCT06 - AIS Info]

FYI

-----Original Message-----

From: John.R.Luff@uscg.mil [<mailto:John.R.Luff@uscg.mil>]  
Sent: Wednesday, November 01, 2006 5:39 PM  
To: Turrell Morgan  
Cc: Sheffield, Andrew LCDR  
Subject: FW: [Fwd: Re: Miss Megan - 12OCT06 - AIS Info]  
Importance: High

Morgan,

The track/positions plotted for the MISS MEGAN (ON# 1048911) in the attached document is for the wrong MISS MEGAN (ON# 599049), the one plotted was for the 15 meter long 77 ton tug owned by Louisiana Marine Towing, LLC. It just happened that both MISS MEGANs were in the western part of our AOR outside the AIS charted areas at the same time. I had Mr Peters in VTS look at the AIS data for the date of the incident, and there is no data for our MISS MEGAN for that day or even the day before.

Either their AIS was not functioning or it was turned off.

V/R,

LT John Luff  
Investigations Division  
MSU Morgan City  
PH: 985-380-5347  
FAX: 985-380-5379

"You can't teach a hammer to love nails".

-----Original Message-----

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## JOHN CHANCE LAND SURVEYS, INC.

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From: Fields, Howard  
Sent: Wednesday, November 01, 2006 10:24 AM  
To: Luff, John LT  
Subject: FW: [Fwd: Re: Miss Megan - 12OCT06 - AIS Info]  
Importance: High

-----Original Message-----

From: ASalas@jchance.com [<mailto:ASalas@jchance.com>]  
Sent: Wednesday, October 25, 2006 4:50 PM  
To: Turrell Morgan; Gilbreath, Terry CAPT; Fields, Howard; Johnson, Jeffrey CDR; Tim.Osborn@NOAA.GOV  
Cc: Sheffield, Andrew LCDR; Paciorka, Richard LCDR; mikedevons@noaa.gov; cjgr@chevrontexaco.com; rex.bernard@chevron.com  
Subject: RE: [Fwd: Re: Miss Megan - 12OCT06 - AIS Info]  
Importance: High

Gentlemen's,  
I plotted all the vessels tracking positions and I'm still getting the same tracking positions from previous AIS file.

Adrian Salas  
John Chance Land Surveys Inc.  
Acoustic Imaging Specialist  
200 Dulles Drive  
Lafayette, LA 70506-3001  
Direct: 337-268-3153  
Fax: 337-268-3281  
[asalas@jchance.com](mailto:asalas@jchance.com)

-----Original Message-----

From: Turrell Morgan [<mailto:morgan.turrell@ntsb.gov>]  
Sent: Wednesday, October 25, 2006 3:22 PM  
To: Terry.D.Gilbreath@uscg.mil; Salas, Adrian; Fields, Howard; Johnson, Jeffrey CDR; Tim.Osborn@NOAA.GOV  
Cc: Sheffield, Andrew LCDR; Paciorka, Richard LCDR  
Subject: RE: [Fwd: Re: Miss Megan - 12OCT06 - AIS Info]

Captain,

I concur. Mr. Fields and I looked at some of the data last week and some info didn't add up.

I was wondering where the time stamp comes from? (the system or the vessel?)

MT



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## JOHN CHANCE LAND SURVEYS, INC.

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-----Original Message-----

From: Terry.D.Gilbreath@uscg.mil [<mailto:Terry.D.Gilbreath@uscg.mil>]

Sent: Wednesday, October 25, 2006 4:08 PM

To: ASalas@jchance.com; Fields, Howard; Johnson, Jeffrey CDR; Tim.Osborn@NOAA.GOV

Cc: Sheffield, Andrew LCDR; Paciorka, Richard LCDR; Turrell Morgan

Subject: RE: [Fwd: Re: Miss Megan - 12OCT06 - AIS Info]

Adrian

We should be able to bring in some technical experts as to AIS. The information that we provided could be skewed by signal strength, parallax type effects, etc. We need to have someone that is a technical expert give us an opinion on how to use the data, if we can even use the information.

Regards,

Terry D. Gilbreath  
Captain, U. S. Coast Guard  
Commanding Officer  
Marine Safety Unit Morgan City  
Phone: (985) 380-5305  
Cell: (985) 397-2778

-----Original Message-----

From: ASalas@jchance.com [<mailto:ASalas@jchance.com>]

Sent: Monday, October 23, 2006 5:08 PM

To: Fields, Howard; Johnson, Jeffrey CDR; 'Tim.Osborn@NOAA.GOV'

Cc: Gilbreath, Terry CAPT; Sheffield, Andrew LCDR; Paciorka, Richard LCDR;

'morgan.turrell@NTSB.GOV'

Subject: RE: [Fwd: Re: Miss Megan - 12OCT06 - AIS Info]

Importance: High

I talk to Mr. Fields today and he informed me that the AIS data he provided is the time of the accident. As you can see on the map Miss Megan is not near the area of the accident. If you would like for me to continue or not please let me know.

Adrian Salas  
John Chance Land Surveys Inc.  
Acoustic Imaging Specialist  
200 Dulles Drive  
Lafayette, LA 70506-3001  
Direct: 337-268-3153  
Fax: 337-268-3281  
[asalas@jchance.com](mailto:asalas@jchance.com)

-----Original Message-----

From: Salas, Adrian



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## JOHN CHANCE LAND SURVEYS, INC.

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Sent: Friday, October 20, 2006 1:24 PM  
To: Howard.L.Fields@uscg.mil; Johnson, Jeffrey LCDR; Tim.Osborn@NOAA.GOV  
Cc: Gilbreath, Terry CAPT; Sheffield, Andrew LCDR; Paciorka, Richard LCDR;  
morgan.turrell@NTSB.GOV  
Subject: RE: [Fwd: Re: Miss Megan - 12OCT06 - AIS Info]  
Importance: High

Here is a base map created with the ASI file that was provided to tracked the vessels. Please review the base map so you can see all four vessels at the time of the accident.

Adrian Salas  
John Chance Land Surveys Inc.  
Acoustic Imaging Specialist  
200 Dulles Drive  
Lafayette, LA 70506-3001  
Direct: 337-268-3153  
Fax: 337-268-3281  
asalas@jchance.com

-----Original Message-----

From: Howard.L.Fields@uscg.mil [<mailto:Howard.L.Fields@uscg.mil>]  
Sent: Thursday, October 19, 2006 9:49 AM  
To: Johnson, Jeffrey LCDR; Salas, Adrian; Tim.Osborn@NOAA.GOV  
Cc: Gilbreath, Terry CAPT; Sheffield, Andrew LCDR; Paciorka, Richard LCDR;  
morgan.turrell@NTSB.GOV  
Subject: RE: [Fwd: Re: Miss Megan - 12OCT06 - AIS Info]

Adrian and Tim,

As directed by CDR Johnson, I've am providing the raw data generated by our tracking system.

Each line in the text file is either an actual AIS position reported by the subject vessel's AIS transponder unit OR a dead reckoning position determined by our software.

Actual AIS positions MUST contain the word "TRACKED" to be a valid.  
If it does not contain the word "TRACKED", then it means our software was dead-recking the vessel.

There are 2 separate times on each line of AIS position info. The first, is the time the data was extracted from our system (approx 2030 to 2230 on 17 Oct 06). The second "time", is the actual AIS position OR the dead reckoned position provided by our system. Both times are CDT.

Four vessels were captured (Subject vessel and three assist vessels).  
You must use the Track ID  
to determine which vessel is reporting.



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## JOHN CHANCE LAND SURVEYS, INC.

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Track ID's  
1005 Miss Megan  
979 Yancey O  
591 Miss Joanne  
1697 Miss Kim

Each of the track message lines in the log file contain the following fields seperated by commas:

N/A, time stamp, track  
ID,N/A,N/A,N/A,N/A,MMSI,N/A,N/A,TRACKED,latitude,longitude,course,speed,  
N/A

If you have any questions, please feel free to call.

Howie  
985 397-3304 cell  
985 380-5333 office

-----Original Message-----

From: Johnson, Jeffrey LCDR  
Sent: Thursday, October 19, 2006 8:59 AM  
To: Fields, Howard; [asalas@jchance.com](mailto:asalas@jchance.com)  
Cc: Gilbreath, Terry CAPT; Sheffield, Andrew LCDR; [morgan.turrell@ntsb.gov](mailto:morgan.turrell@ntsb.gov);  
[Tim.Osborn@noaa.gov](mailto:Tim.Osborn@noaa.gov)  
Subject: FW: [Fwd: Re: Miss Megan - 12OCT06 - AIS Info]  
Importance: High

Howard - in accordance with our conversation this morning with Capt Turrell, NTSB, and the endorsement of Tim Osborn, NOAA, please release requested information as soon as possible to Mr. Salas. Please notate that info not designated as "tracked" are projections of vessel(s) position based on last validated course and speed.

Thanks.  
Jeff

-----Original Message-----

From: [Tim.Osborn@noaa.gov](mailto:Tim.Osborn@noaa.gov) [<mailto:Tim.Osborn@noaa.gov>]  
Sent: Wednesday, October 18, 2006 4:40 PM  
To: Johnson, Jeffrey LCDR  
Cc: Gilbreath, Terry CAPT; [Ed.Martin@noaa.gov](mailto:Ed.Martin@noaa.gov)  
Subject: [Fwd: Re: Miss Megan - 12OCT06 - AIS Info]

Jeff



Fugro made partial progress in the surveys today but had to stand down for weather. If possible, it would help to side-scan the area around the barge before the area is closed for dive ops when the weather window opens again.

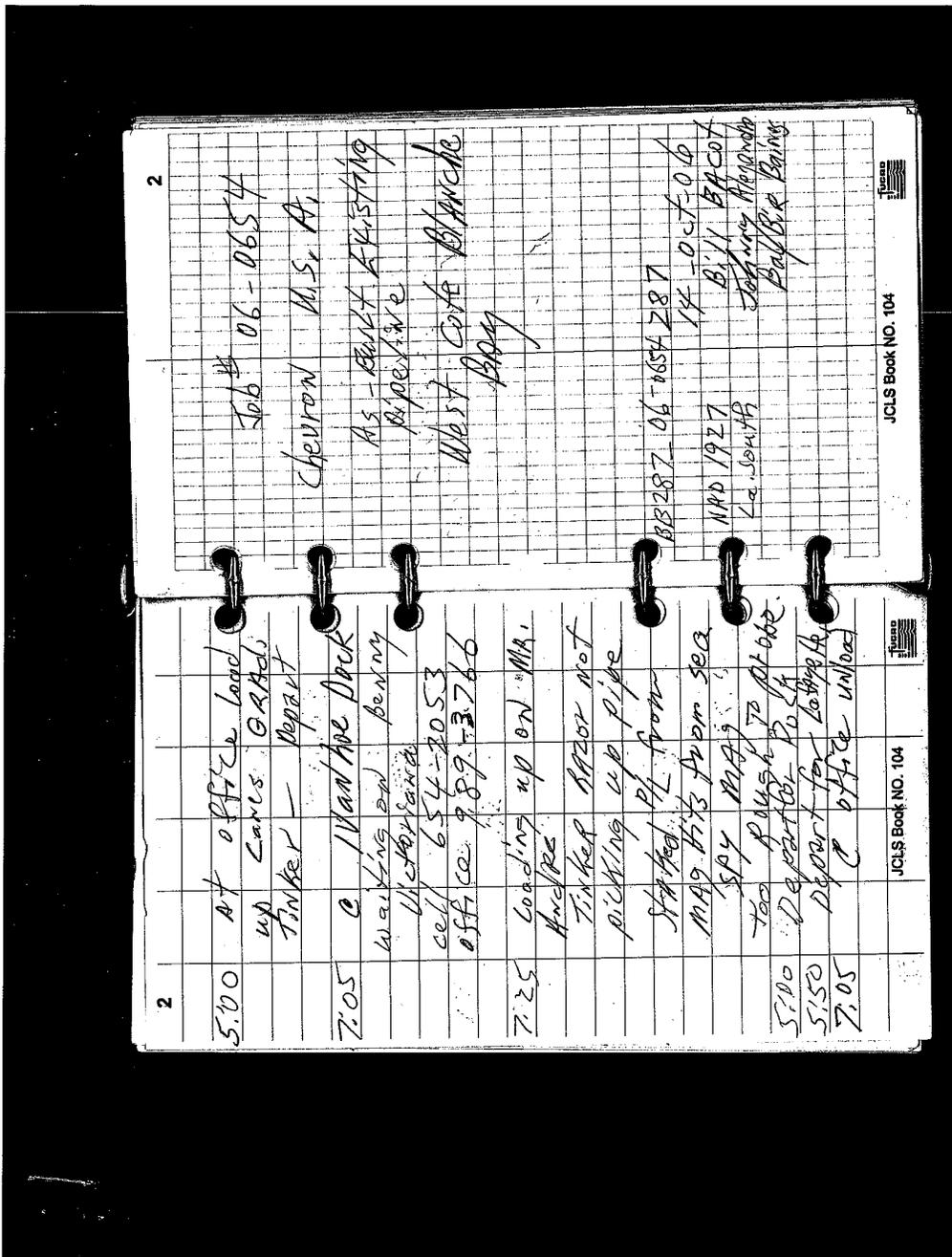
The Fugro survey crew have asked Howard Fields for some additional AIS track times and information. This should help to resolve any discrepancies on what direction the barge and tug was moving as it entered the incident site. We also need to verify the time zone that was used to record the time of the transit as well.

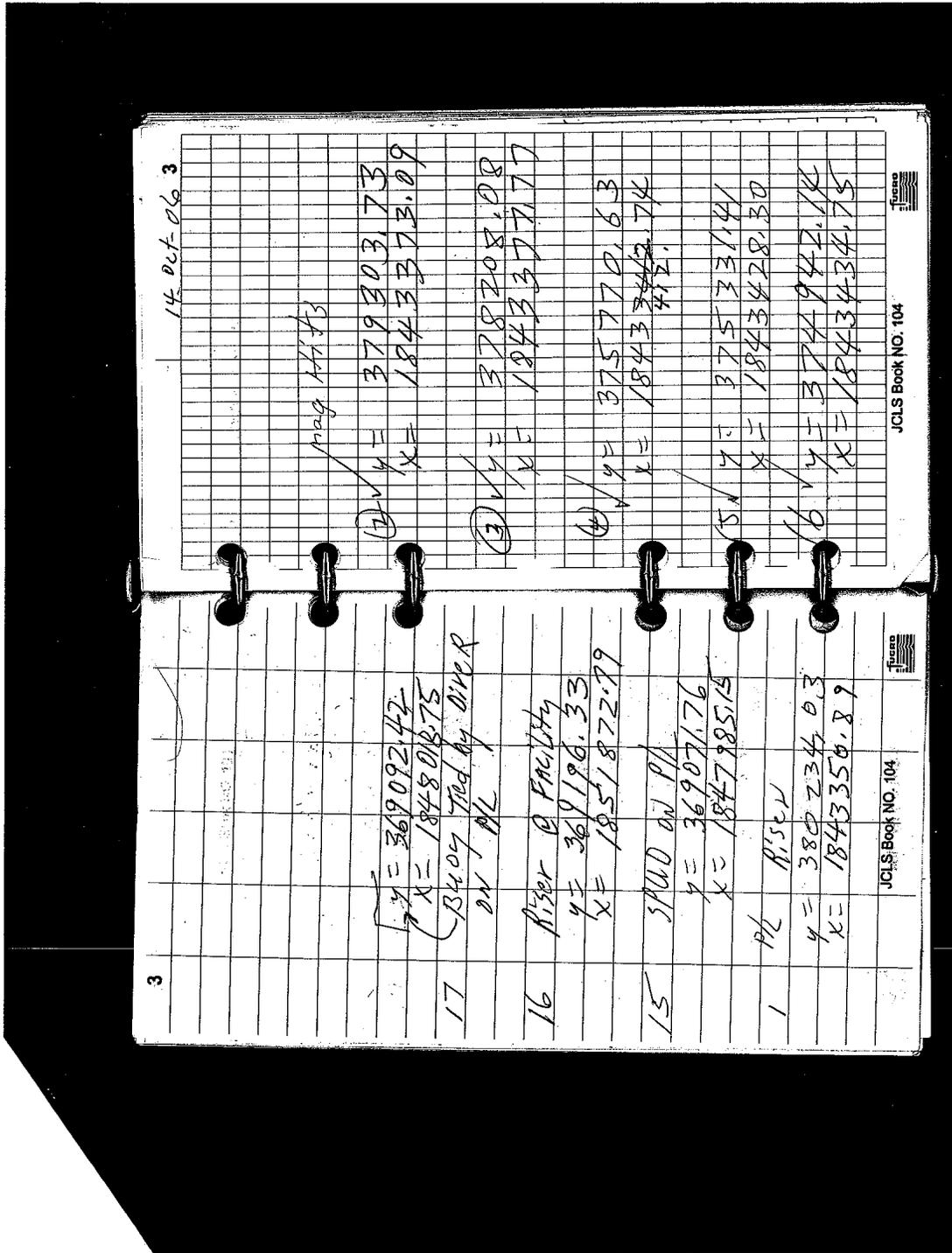
I'll come to Morgan City and should arrive before the 2:00 meeting in order to meet and brief you.

Tim



APPENDIX C – FIELD AND SURVEY NOTES





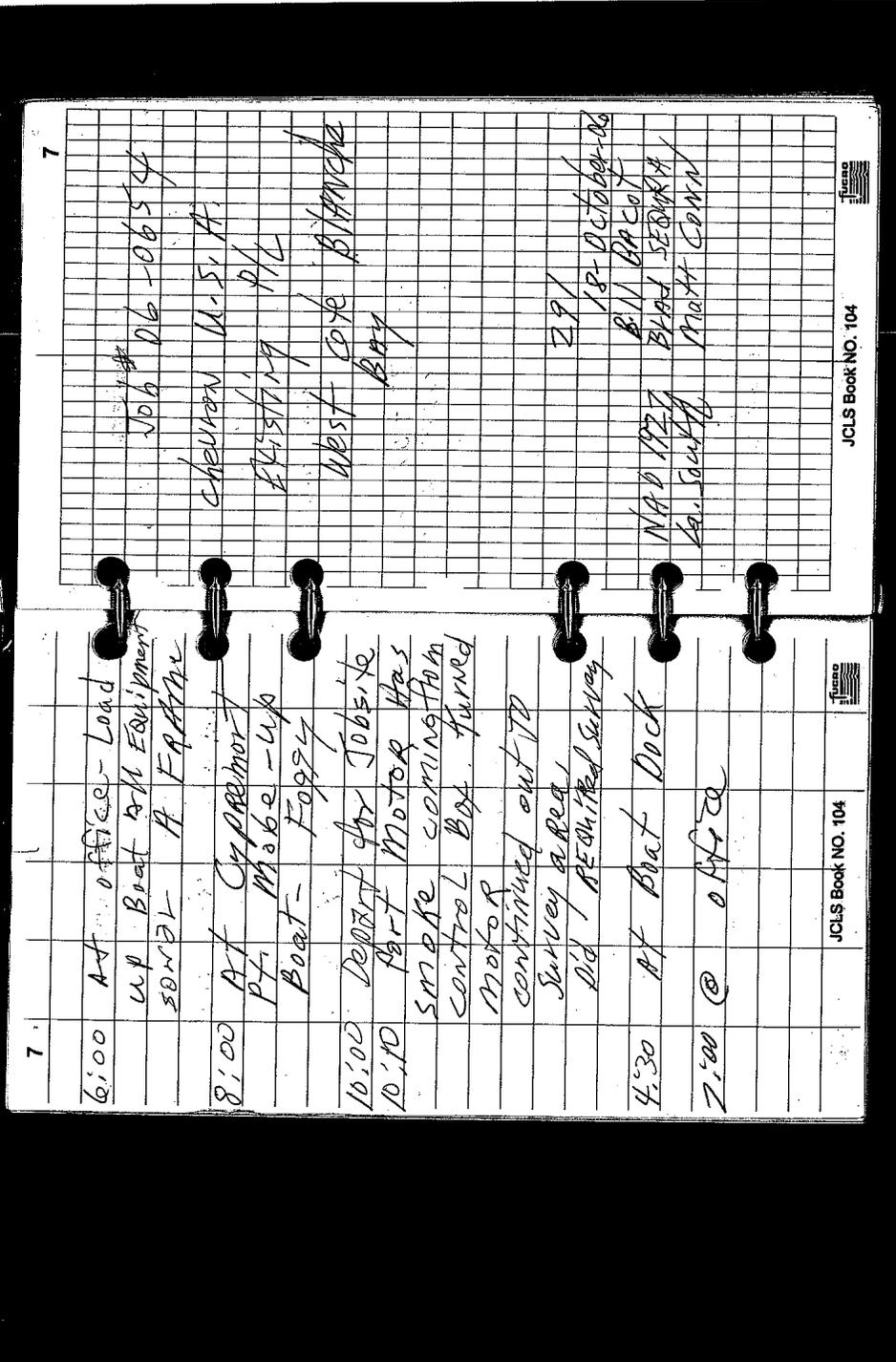


14 Oct - 06

(12)	y = 371202.10 ✓ x = 1843487229	(7)	y = 374329.49 ✓ x = 1843435133
(13)	y = 370418.59 ✓ x = 1843487201	(8)	y = 373658.75 ✓ x = 1843454145
(14)	y = 369181.07 ✓ x = 1843518.01 10214	(9)	y = 373030.43 ✓ x = 1843459145
		(10)	y = 372390.57 ✓ x = 1843436190
		(11)	y = 371898.70 ✓ x = 1843479.92 10211

JCLS Book NO. 104





7

Job # 06-0654  
 Cheyenne M.S.A.  
 Existing P/L  
 West Lake Branch  
 Bay

29 / 18-October-06  
 Bill Baker  
 Brad Seibert  
 Matt Conn  
 NAD 1983  
 Ea. South

JCLS Book No. 104

7

6:00 AT office - Load  
 up Boat & M Equipment  
 sonar A FATHM

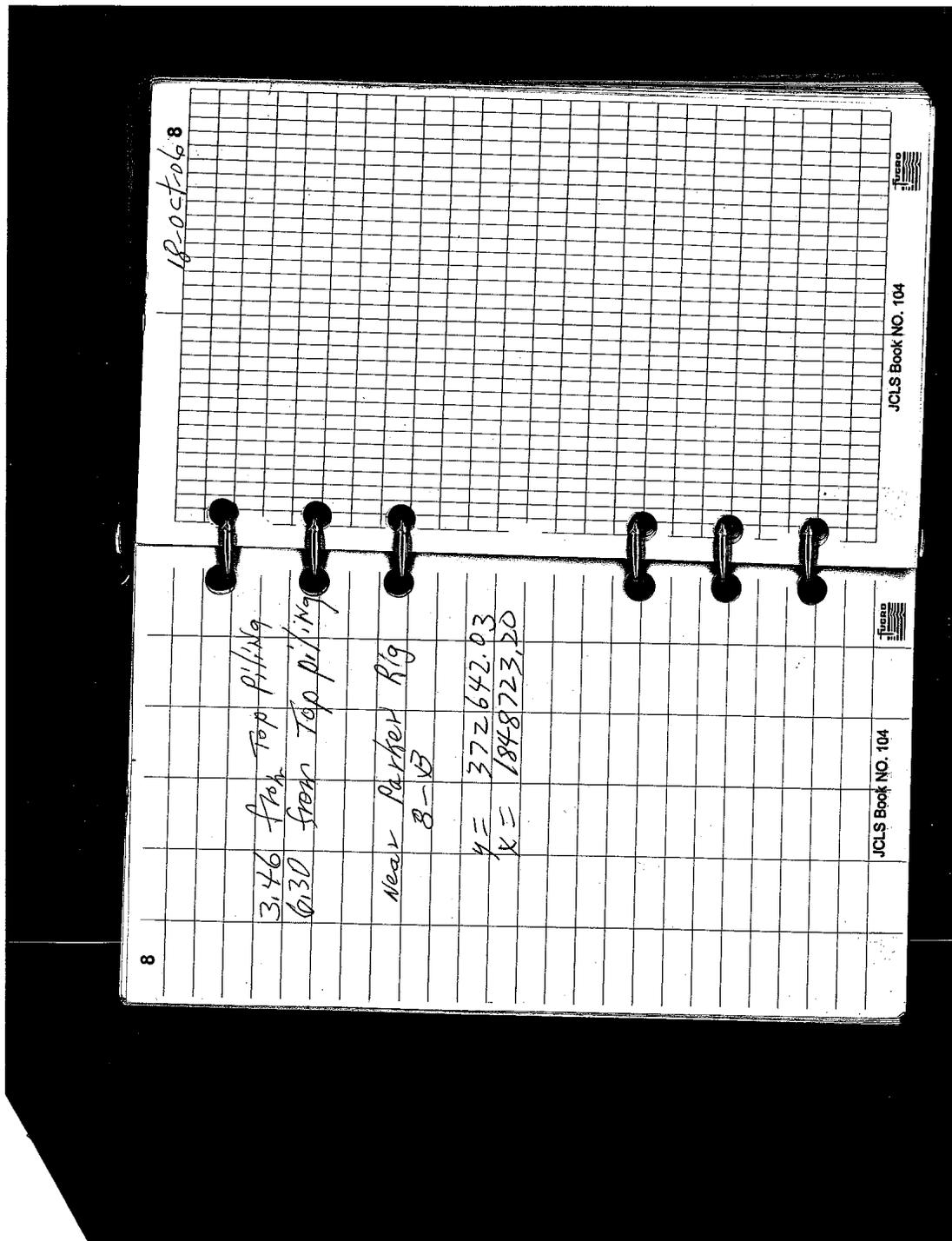
8:00 AT Cypressport  
 Pt. Mobe - up  
 Boat - Foggy

10:00 Depart for Jobsite  
 10:10 Part Motor Has  
 smoke coming from  
 control Box. turned  
 motor  
 continued out to  
 Survey area,  
 did RE-UNITED Survey

4:30 AT Boat Dock

7:00 @ office

JCLS Book No. 104



# JOHN CHANCE LAND SURVEYS, INC.



## SURVEYORS DAILY REPORT

John Chance Land Surveys, Inc.  
200 Dulles Drive, Lafayette, LA 70506  
Phone 337-237-1300 Fax 337-268-3281

Buictorian@a chevron r rncb.com



Client	chevron	Report No.	
Job Desc:		Date:	10-16-06 - 10-20-06
Client Job #		Job No.	06 0654
Vessel:		Job Type	
Location:	west Cote Blanch		

EQUIPMENT	HRS.	PERSONNEL	NAME	HOURS
Starfix Nav		C	SONAR TECH	Cliff Laroche
Side Scan Sonar			HELPER	Joey Devillier
Scanning Sonar			PARTY CHIEF	BRAD SEGORA
Digital Fathometer			HELPER	MATT COAN
Magnetometer				
Sub-Bottom Profiler				
WEATHER CONDITIONS				

Starfix: <input checked="" type="checkbox"/>	Description: <u>Trans. Check</u>	Time: _____
Sonar: <input checked="" type="checkbox"/>	Description: <u>Rub Test</u>	Reading: _____
Mag: _____	Description: _____	Time: _____
		Reading: _____

Staff Gage Start  
End

Start	End	Daily Report Detail
		Rough, Windy, rainy
0430	0600	Enroute to Ivanhoe Dock
0615	0730	Took crewboat to platform
0730	1015	Tow Rough to work, stuck on platform
1015	1115	Took crewboat back to Dock.
1130	1200	Loaded Equipment in Truck.
1250	1330	Enroute to Office
1330	1430	In office- reviewing Data
		Oct 17 overcast, light chop, light wind
0430	0600	Enroute to Ivanhoe Dock
0615	0715	Enroute to Platform
0715	0800	standby on Platform
0800	0915	set up Equipment on M/T Janet
0915	0930	Pic 1 west Pic 2 SW Pic 3 South
0930	1000	Tied in four Corners of Barge and 2 spuds
1010	1030	Drop 1 (can see crew parked on south side)
1030	1045	Drop 2 Data no good - sonar sitting in a hole
1045	1120	Drop 3 noticed small sink drag mark
1120	1125	Drop 4 noticed pipe on East end of barge
1125	1117	Drop 5 noticed pipe stuck to spud and one crossing 90°
1234	1245	Drop 6 I did not feel comfortable trying to liveboat the sonar with Benny driving
1300	1340	Started tearing down equip

Approved by Larry Prewitt, Manager of Marine Operations Dev.  
Note to ensure that this is the latest version, check the Electronic Master File. Form MO-FF-016 Date 1/31/05

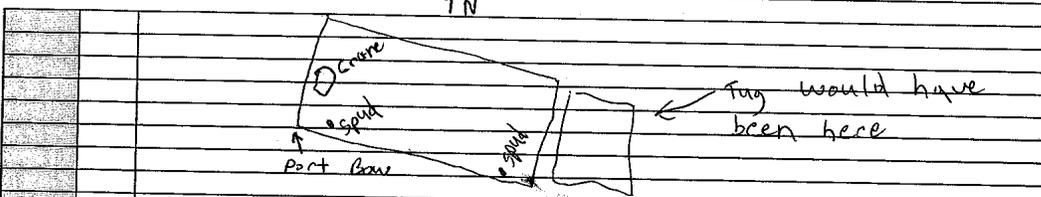


DIARY DAILY REPORT

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Client		Report No.	
Job Desc:		Date:	10-16-06 - 10-20-06
Client Job #		Job No.	
Vessel:		Job Type	
Location:			



1345	1400	Enroute to Ivanhoe dock
1400	1530	Enroute to office.
Oct 18 Foggy, calm seas, light breeze		
0430	0600	Enroute to dock
0615	0715	Enroute to Jackup Rig
0715	0800	Safety meeting
0800	0830	Setup Starfix and Sonar
0830	0935	Moved Rig to 85 ft south of Barge, Sonar Drop 7 - Noticed possible pipe under two front pads, divers will investigate.
0835	0937	Drop 8 - Near Port leg to get better look at possible pipe.
0938	0742	Drop 9 - near Starboard leg to get better view of possible pipe.
0948	1152	Drop 10 - off front center - Standing by while divers setup.
1155	1330	Drop 11 - walked diver to possible pipe under Jackup Rig pads, diver moved sonar closer to spud barge.
		Marker 5 (in sub file) indicates where diver found 3" on 8"
1335	1358	Drop 12 - had problems tracking diver.
1400	1430	Divers setting up jet pump (Bad signa running sidescan while divers out of water)
1430	1540	Divers looking pipe locator equipment, to pipeline.
1540	1600	Tearing down equipment.
1600	1640	Enroute to dock.
1645	1800	Enroute to office.
Oct 20 Windy - Rough - Sunny - seas calming through the day		
0430	0600	Left office to dock
0600	0640	Mob the Boat (Capt. Christopher)
0640	0825	Head to location Tide Gauge (Bolt Spike) (5 ft from Bolt Spike to water)
0830	0830	Free distance line 2 near Barge WATER DEPTH ELECTRIC = 3.0
0833	0844	F.D. Line 3 near Barge. SOUNDINGS = 3.0
0844	0848	F.D. Line 4
0850	0854	F.D. Line 5
0855	0900	F.D. Line 6
0901	0913	F.D. Line 7
0914	0918	F.D. Line 8
0919	0936	F.D. Line 9
0937	0947	F.D. Line 10
0948	0952	F.D. Line 11

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Client	CHEURON	Report No.	1
Job Desc:	Repair 8" PIPELINE	Date:	11-8-06
Client Job #		Job No.	06-0654
Vessel:	BB-45	Job Type	SCANNING SONAR
Location:	WEST COLE BLANCH		

EQUIPMENT	HRS.	PERSONNEL	NAME	HOURS
Starfix. Nav		WITZ P.C.		15
Side Scan Sonar		HELPER	ADRIAN SALES	15
Scanning Sonar				
Digital Fathometer				
Magnetometer				
Sub-Bottom Profiler				
		WEATHER CONDITIONS	CLEAR CALM	

Equipment Check		Staff Gage Start	
Starfix: _____	Description: _____	Time: _____	Reading: _____
Sonar: _____	Description: _____	Time: _____	Reading: _____
Mag: _____	Description: _____	Time: _____	Reading: _____
		End	

Start	End	Daily Report Detail
04:30	06:00	ENROUTE TO CHEURON DOCK
06:00	06:30	ARRIVE DOCK CHECK IN
06:30	10:00	START SAFETY COURSE
10:00	10:30	SAFETY COURSE END
10:30	11:20	DEPT TO BB-45 BARGE
11:20	12:00	ARRIVE BARGE
12:00	12:30	SAFETY MEET AT BARGE
12:30	13:00	START SETTING UP
13:00	16:00	ALL EQUIPMENT SET UP, HAVING PROBLEMS WITH LAPTOP COMPUTER
16:00	17:00	COMPUTER WORKING
17:00	17:45	ENROUTE TO DOCK
17:45	19:30	EN ROUTE TO LAFAYETTE
		FILES 11-8-06 14:47:22 SD-1 Sonar Drop N369129.20 E184794.24
		N369129.26 E184795.231 4:49:36 Port Stern 1 Barge Leg
		N369132.22 E184794.04 4:45:44 Midpoint -1 Middle at Barge

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Client	Chevron	Report No.	
Job Desc:	Helper & Pipeline / Scanning Sonar	Date:	11-9-06
Client Job #		Job No.	06-1654
Vessel:	BB-45	Job Type	Scanning Sonar
Location:	West Cote Blanc		

EQUIPMENT	HRS.	PERSONNEL	NAME	HOURS
Starfix. Nav	7.5	Party Chief	Leonard VITZ	12
Side Scan Sonar	—	Helper	Robert Nussing	12
Scanning Sonar	7.5			
Digital Fathometer	—			
Magnetometer	—			
Sub-Bottom Profiler	—			
		WEATHER CONDITIONS	Clear Sunny	
			CAIM	

Equipment Check

Staff Gage  
Start

Starfix: \_\_\_\_\_ Description: \_\_\_\_\_

Sonar: \_\_\_\_\_ Description: \_\_\_\_\_

Mag: \_\_\_\_\_ Description: \_\_\_\_\_

Time: \_\_\_\_\_

Reading: \_\_\_\_\_

End

Time: \_\_\_\_\_

Reading: \_\_\_\_\_

Start	End	Daily Report Detail
0430	600	Drive To Ivanhoe Dock
600	700	Get on Boat and Travel to Barge
700	800	SAFETY Meeting JSA, SAFETY Procedures
800	945	Set up Sonar and Starfix
945		Get Fixes on Barge Legs
		Port Stern - 2 10:17:03 N 369112.06 E 1847821.23
		Port Bow - 2 10:18:48 N 369129.78 E 1847922.92
		Reflector Stern - 2 12:16:43 N 369071.96 E 1847855.13
		Sonar Dred - 2 12:18:21 N 369073.60 E 1847864.64
	12:33	Reflector Bow - 2 12:33:17 N 369088.96 E 1847947.04
		Point # 8 is A BAD Point do not use
1630	1630	Tie in Buoy # 7, 6, 8, 5, 3, 4, 10, 11, 15, 14, 16, Stamp 13, 12, 1, 17, 18, 20 USMG
		Text in AS Log Software
		Reflectors are Marked AS Ref Marks on Image

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APPENDIX D – CORRELATION BETWEEN MSL AND MLLW

